

MASS. AAB1.2: D 78

Architectural Access Board

Draft Regulations

UMASS/AMHERST



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GOVERNMENT DOCUMENTS  
COLLECTION

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October 1, 1993



What follows is a draft version of the revised Architectural Access Board Regulations prepared for public hearings in November of 1993. This rewrite was initiated to make corrections and respond to comments/suggestions submitted to the board since the last major rewrite in 1982 and to respond to the federal legislation of the Fair Housing Act and the Americans with Disabilities Act.

The Access Board is encouraging all comments, with a special interest in comments on items that seem inadequate, unclear, or excessive in nature. Any problems that have resulted in the field, or from manufacturers would also be timely. All comments should be in writing to the Board, and submitted by January 1, 1994.

Items which are of special interest and on which the Board is seeking comments include

Items where the AAB requirement exceeds the ADA:

- Door clear width - Section 26
- Toilet stalls - Section 30
- Public Telephones - Section 37
- Ramp Slope Exceptions - Section 24
  
- Comments on Revised Scoping Provisions - Section 3
- Determining Assessed Value - Section 3
- Repairs - Section 3
- Adaptable Housing Provisions - Section 8-10, 42-46
- Jurisdiction over Townhouses - Section 9.9 (How should an individual townhouse be required to be accessible/adaptable.)

The revised Regulation will not replace all of the ADA, but will largely replace the technical requirement of the ADA guidelines, which should simplify compliance with accessibility issues in Massachusetts. Once published, the new Regulation will be submitted to the Department of Justice for certification of substantial equivalence.

Public Hearing Dates are as follows:

- November 3, 1993 1:00 to 4:00 P.M. -  
Gus Canty Community Ctr, 790 Main St, Falmouth
- November 5, 1993 1:00 to 4:00 P.M. -  
Bangs Community Center, Boltwood Walk, Amherst
- November 8, 1993 1:00 to 4:00 P.M. -  
Worcester State College, Blue Lounge, Worcester
- November 9, 1993 5:30 to 8:30 P.M. -  
University of Mass., - Healy Library, 11th floor, Boston
- November 10, 1993 1:00 to 5:00 P.M. -  
One Ashburton Place, 21st floor, Boston

# THE HISTORY OF THE UNITED STATES OF AMERICA

BY JAMES M. SMITH, D.D., LL.D., F.R.S., F.R.A.S., F.R.I.C., F.R.G.S., F.R.H.S., F.R.S.E., F.R.S.N., F.R.S.O., F.R.S.I., F.R.S.D., F.R.S.P., F.R.S.M., F.R.S.A., F.R.S.C., F.R.S.L., F.R.S.K., F.R.S.N.Z., F.R.S.A.F., F.R.S.N.A., F.R.S.A.S., F.R.S.A.M., F.R.S.A.E., F.R.S.A.A., F.R.S.A.C., F.R.S.A.D., F.R.S.A.F., F.R.S.A.G., F.R.S.A.H., F.R.S.A.I., F.R.S.A.J., F.R.S.A.K., F.R.S.A.L., F.R.S.A.M., F.R.S.A.N., F.R.S.A.O., F.R.S.A.P., F.R.S.A.Q., F.R.S.A.R., F.R.S.A.S., F.R.S.A.T., F.R.S.A.U., F.R.S.A.V., F.R.S.A.W., F.R.S.A.X., F.R.S.A.Y., F.R.S.A.Z.

THE HISTORY OF THE UNITED STATES OF AMERICA, FROM THE FIRST DISCOVERY OF THE CONTINENT TO THE PRESENT TIME. IN FIVE VOLUMES. VOL. I.

THE HISTORY OF THE UNITED STATES OF AMERICA, FROM THE FIRST DISCOVERY OF THE CONTINENT TO THE PRESENT TIME. VOL. II.

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THE HISTORY OF THE UNITED STATES OF AMERICA, FROM THE FIRST DISCOVERY OF THE CONTINENT TO THE PRESENT TIME. VOL. XII.



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## Authority

- 1.1 These Rules and Regulations are promulgated by the Architectural Access Board pursuant to authority granted by the General Laws, Chapter 22, Section 13A (see Appendix).
- 1.2 Under the provisions of Chapter 528 of the Acts of 1974, Section 2, all orders, rules and regulations duly granted by the Board To Facilitate The Use Of Public Buildings By The Physically Handicapped, which were in force immediately prior to the effective date of said chapter, shall continue to be in force, and the provisions thereof to be enforced until superseded, revised, rescinded or cancelled in accordance with the law by the Architectural Access Board.
- 1.3 These Rules and Regulations supersede and revise the Rules and Regulations of the Architectural Access Board, designated as 521 CMR, 1.00 et. seq.

### Enabling Legislation

### Effective Date of Regulations

Chapter 528, Acts of 1974

June 10, 1975

*Complete revision: March 3, 1977*

*Complete revision: April 1, 1982*

Chapter 642, Acts of 1986

*Amendments to Sections 5, 10, 11  
and 23: July 10, 1987*

Chapter 722, Acts of 1989 (Housing Bill of Rights)

*Amendments to Section 18:  
September 28, 1990*

*Amendments to Sections 30.5.2 &  
35.9: January 1, 1992*

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**Purpose and Scope****2.1 PURPOSE**

These Rules and Regulations are designed to make *public buildings accessible* to, functional for, and safe for use by *persons with disabilities*.

**2.2 INTENT**

It is the intent of these Rules and Regulations to provide *persons with disabilities* full and free *use* of all *buildings* and facilities so that all such persons may have the educational, living and recreational opportunities necessary to be as self-sufficient as possible and to assume full responsibilities as citizens.

**2.3 VIOLATIONS**

These Rules and Regulations are deemed to be a specialized code as referred to in Section 96 of Chapter 143 of the General Laws, the violation of which shall constitute gross negligence for the purposes of clause (d) of Section 60G of Chapter 112 of the General Laws, and shall be subject to the additional powers granted to the *Board* by Section 13A of Chapter 22 of the General Laws.

2.3.1 The *Board* shall receive complaints of non-compliance with any rule or regulation from any person or may receive complaints initiated by its own staff. If the *Board* finds, after notice and opportunity for a hearing, that any person is not in compliance with any rule or regulation, it may issue an order to compel such compliance. Such order may specify the date and the manner by which such person shall cure the noncompliance found by the Board and may require that pending the cure of such noncompliance a performance bond be furnished, payable to the commonwealth, in such penal sum as the *Board* finds reasonable.

2.3.2 In the event that a person fails to cure such noncompliance by the date specified in the *Board's* order, the *Board* shall be empowered, after further hearing, to impose a fine payable to the commonwealth not to exceed one thousand dollars per day for each violation for each day of noncompliance as to which the *Board* finds that such noncompliance was without justification.

2.3.3 The *Board* shall also have the power, if it determines that such failure to cure noncompliance is willful and deliberate, to bring a complaint before any appropriate licensing or permit granting authority against the license or permit of such person.

2.3.4 The *Board* shall have the authority to issue subpoenas.

**2.4 GENERAL CONVENTIONS**

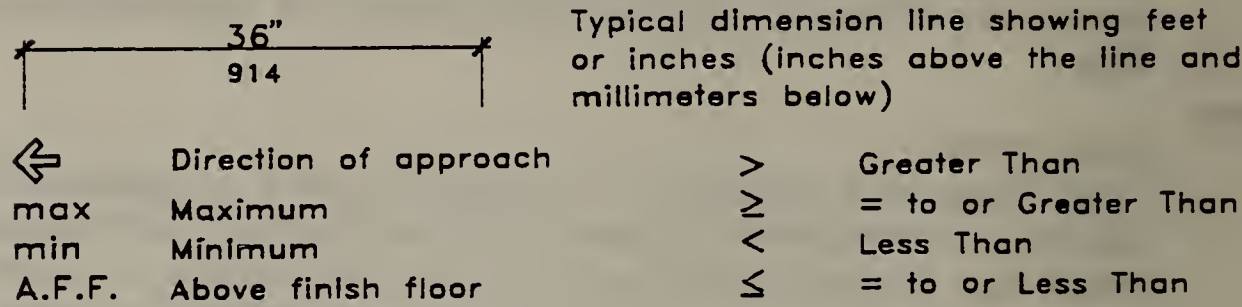
The following conventions apply when using these Regulations:

2.4.1 The written word supersedes the visual diagrams if there is a discrepancy between two requirements.



Purpose and Scope

- 2.4.2 If there is a conflict between written requirements within these Regulations or between these Regulations and other codes, the requirement which provides the greater level of accessibility shall apply.
- 2.4.3 Graphic conventions are shown in Figure 2a. Dimensions that are not marked minimum or maximum shall comply with Section 2.4.5, unless otherwise noted in the text or captions.



Graphic Conventions  
Figure 2a

- 2.4.4 Words *italicized* in the text indicate that a definition of that word is provided in Section 5, Definitions.
- 2.4.5 Tolerances on all dimensions shall not exceed the following, unless otherwise noted in the Regulations:
  - a. Dimensions between zero and two inches (0" and 2" = 0mm and 51mm) inclusive shall have a maximum tolerance of plus or minus one-eighth inch (1/8" = 3mm).
  - b. Dimensions between two inches and thirty-six inches (2" to 36" = 51mm to 914mm) inclusive shall have a maximum tolerance of plus or minus one-half inch (1/2" = 13mm).
  - c. Dimensions greater than thirty-six inches (36" = 914mm) shall have a maximum tolerance of plus or minus one inch (1" = 25mm).
- 2.4.6 When a percentage is calculated to determine the number of *accessible elements*, if the number ends in a fraction of five-tenths (.5) or more, the number shall be rounded up to the next whole number. If the number ends in a fraction less than five-tenths (.5), the number shall be rounded down.
- 2.4.7 When calculating the conversion from inches to millimeters (using 1"=25.4mm), if the number ends in a fraction of five-tenths (.5) or more, the number shall be rounded up to the next whole number. If the number ends in a fraction less than five-tenths (.5), the number shall be rounded down.

2.5 REASONABLE MODIFICATIONS

*Reasonable modifications to public use and common use spaces in a multiple dwelling must comply with these Regulations. These Regulations do not apply to requests for reasonable modifications to an individual unit.*

**Jurisdiction****3.1 SCOPE**

All work performed including *construction, reconstruction, alterations, remodeling, additions*, and changes of *use* shall conform to these Regulations. To determine the scope of compliance, refer to **Section 3.2** and **3.3**. In the absence of jurisdiction by this code, Section 512.0 of the State Building Code may apply.

**3.2 NEW CONSTRUCTION**

All new *construction* shall comply fully with these Regulations.

**3.3 EXISTING BUILDINGS**

All *additions* to, *reconstruction, remodeling, and alterations* or *repairs* of existing *buildings*, which require a building permit or which is so defined by a state or local inspector, shall be governed by all applicable subsections in **Section 3**.

**3.3.1** If the work being performed amounts to less than thirty percent (30%) of the *full and fair cash value of the building* and

- a. if the work costs less than \$100,000, then only the work being performed is required to comply with these Regulations

or

- b. if the work costs \$100,000 or more, then the work being performed is required to comply with these Regulations. In addition, an *accessible* public *entrance* and an *accessible* toilet room, telephone, drinking fountain (if toilets, telephones and drinking fountains are provided) shall also be provided in compliance with these Regulations.

**3.3.2** If the work performed amounts to thirty percent (30%) or more of the *full and fair cash value* of the building, the entire facility is required to comply with these regulations.

- a. Where the cost of constructing an *addition* to a building amounts to thirty percent (30%) or more of the *full and fair cash value* of the existing *building*, both the *addition* and the existing *building* must be fully *accessible*.

Exceptions: The following types of *alterations* are not subject to **Sections 3.3.1** and **3.3.2**.

- a. Curb Cuts; The construction of *curb cuts* shall comply with **Section 21** of these regulations.
- b. Repairs; *Ordinary repairs* as defined in Section 102.0 of the State Building Code 780 CMR; and
- c. Alteration work which is limited solely to electrical, mechanical, or plumbing systems; to abatement of hazardous materials; to retrofit of automatic sprinklers and does not involve the *alteration* of any *elements* or *spaces* required to be *accessible* under these Regulations.



**Jurisdiction**

Where electrical outlets and controls are altered, they must comply with these Regulations.

- 3.3.3 Tenant vs. owner of *building*. *Alterations* by a tenant do not trigger the requirements of **Section 3.3.1b and 3.3.2** for the owner. Although tenants are not required to make changes in areas not under their control, any work that tenants do must comply with these Regulations.
- 3.3.4 No *alteration* shall be undertaken which decreases or has the effect of decreasing accessibility or usability of a *building* or *facility* below the requirements for new *construction*.
- 3.3.5 If *alterations* of single *elements*, when considered together, amount to an alteration of a room or *space* in a *building* or *facility*, that *space* shall be made *accessible*.
- 3.3.6 No *alteration* of an existing *element*, *space*, or area of a *building* or *facility* shall impose a requirement for greater accessibility than that which would be required for new *construction*.

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**3.4**

**WORK PERFORMED OVER TIME**

When the work performed on a *facility* is divided into separate phases or projects or is under separate *building* permits, the total cost of such work in any thirty-six (36) month period shall be added together in applying the Regulation in **Section 3.3**.

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**3.5**

**MULTIPLE USES**

When a *building* is occupied by two (2) or more uses, the Regulations which apply to each *use* shall apply to such parts of the *building* within that *use*.

3.5.1

The Regulations in **Section 3.3** shall apply based upon each *use* and not on the entire *building*.

Example: If a three *story building* valued at \$300,000 has one floor of retail *use* and two floors of residential *use*, the *full and fair cash value* of the retail portion shall be \$100,000.

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**3.6**

**PARTIAL APPLICATION**

When only a portion of a *building* is subject to these Regulations, the *full and fair cash value* shall be prorated by the ratio of the square footage of that portion to the square footage of the whole *building*.

Example: Where the whole *building* is 100,000 square feet and the *full and fair cash value* is \$1,000,000, and if the part subject to the Regulations is 10,000 square feet (one-tenth of the total), then the *full and fair cash value* of the part subject to the Regulations would be one-tenth of \$1,000,000 or \$100,000.

**Jurisdiction**

- 3.6.1 If the *Board* determines that such proration would cause an inequitable result, the *Board* may otherwise calculate the *full and fair cash value* of the portion of the *building*.

3.7 **OUTDOOR FACILITIES**

For facilities where the *primary function areas* are outdoors, including but not limited to beaches, parks, picnic areas, playgrounds, and campsites, the *full and fair cash value* shall include the value of the land as well as any *buildings* or facilities on the land.

3.8 **HISTORIC BUILDINGS**

A historic *building* or *facility* that is listed or is eligible for listing in the National Register of Historic Places or is designated as historic under state or local laws may be granted a *variance* by the *Board* to allow alternate accessibility. Only the Massachusetts Historical Commission can determine whether a *building* is eligible for listing on the National Register.

3.9 **TEMPORARY STRUCTURES**

Temporary *buildings* or *facilities*, including but not limited to reviewing stands, temporary classrooms, bleacher areas, exhibit areas, temporary banking facilities, temporary health screening services, or temporary pedestrian passageways around a *construction site*, shall comply with these Regulations. Structures, *sites* and equipment directly associated with the actual processes of *construction*, such as scaffolding, bridging, materials hoists, or *construction* trailers, are not included.

3.10 **SECURITY STRUCTURES**

Accessibility is not required to observation galleries used primarily for security purposes.

3.11 **NON-OCCUPIABLE SPACES**

Spaces accessed only by ladders, catwalks, crawl spaces, or freight (non-passenger) elevators, and frequented only by service personnel for *repair* purposes, are exempt. Such spaces may include, but are not limited to, elevator pits, elevator penthouses, piping or equipment catwalks.

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**Appeal and Variance****4.1 VARIANCES:**

**Application:** An owner or an owner's representative or tenant who thinks that full compliance with these Regulations is impracticable, may apply to the *Board* for a *variance* from these Regulations. Application for a *variance* shall be made on a form provided by the *Board* for this purpose, shall contain such information as is required by the *Board*, and shall be signed by the applicant.

**4.1.1 Board Action:** Upon receipt of an application for *variance*, the *Board* shall investigate the matter and may:

- a. grant the application with whatever conditions it deems appropriate or deny the application without a hearing. Any person aggrieved by the *Board's* action under this Regulation may request an adjudicatory hearing within thirty (30) days of the decision;
- b. schedule a conference to consider the simplification or clarification of the issues and/or the possibility of an agreement disposing of all or any matters as may aid in the disposition of an adjudicatory proceeding. Those matters agreed upon by the parties shall be electronically recorded and/or reduced to writing and shall be signed by the parties, and shall thereafter constitute a part of the record;
- c. commence an adjudicatory hearing in accordance with the provisions of M.G.L. c. 30A and the Standard Adjudicatory Rules of Practice and Procedure, 801 CMR 1.01 or 1.02, as stated in the hearing notice.

**4.2 COMPLAINTS:**

**Initiating a Complaint:** Any person who has knowledge or evidence that any other person has not complied or is not complying with these Regulations, may complain in writing to the *Board* on a special form available from the *Board*.

**4.2.1 Board Action:** Upon receipt of a complaint, the *Board* shall investigate the complaint, and may:

- a. schedule a conference to consider the simplification or clarification of the issues, the possibility of obtaining stipulations and agreements, the possibility of an agreement disposing of all or any of the issues in dispute, and any other matters as may aid in the disposition of an adjudicatory proceeding. Those matters agreed upon by the parties shall be electronically recorded and/or included in a written document and shall be signed by the parties, and shall thereafter constitute a part of the record.
- b. commence an adjudicatory hearing in accordance with the provisions of M.G.L. c. 30A and the Standard Adjudicatory Rules of Practice and Procedure, 801 CMR 1.01 or 1.02, as stated in the hearing notice.
- c. dismiss a complaint at any time.

**Appeal and Variance**

**4.3 HEARINGS**

All adjudicatory hearings shall be conducted in accordance with the provisions of M.G.L. c. 30A and the Standard Adjudicatory Rules of Practice and Procedure, 801 CMR 1.01 or 1.02, as stated in the hearing notice.

4.3.1 Hearings will be scheduled within sixty (60) days of the receipt of a request for an adjudicatory hearing unless the *Board* in its discretion extends such time for good cause shown. The *Board* will schedule hearings on two weeks notice unless it deems a shorter period necessary.

4.3.2 In proceedings under 801 CMR 1.02, the *Board* may provide for mandatory discovery.

4.3.3 The *Board* will issue a decision within twenty-one (21) days of the hearing unless the *Board* in its discretion extends such time.

4.3.4 When the *Board* deems it necessary and subject to appropriation, the services of an independent expert may be sought.

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**4.4 REOPENING HEARING, MOTION FOR RECONSIDERATION**

The *Board* on its own motion, or on motion of any applicant, complainant or aggrieved person, may reopen the hearing in order to receive additional evidence which was not reasonably available at the time of the hearing. The request for reopening shall summarize the new evidence to be presented.

4.4.1 The *Board* shall notify all persons who testified at or received formal notice of an initial hearing of a decision to reopen a hearing to take further testimony or receive further evidence.

4.4.2 Within ten (10) days from the date the *final decision* is mailed by the *Board* to the applicant or complainant, an applicant, complainant, or aggrieved person may file a motion for reconsideration, setting forth the grounds or statutory provisions relied upon to sustain the motion.

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**4.5 APPEALS**

Any party aggrieved by the *final decision* of the *Board* may appeal such decision to State Superior Court in accordance with the provisions of M.G.L. c. 30A, s. 14.

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**4.6 ADVISORY OPINIONS**

Upon the written request of an owner or an owner's representative or tenants, the *Board* may issue advisory opinions concerning the interpretation or applicability of these Rules and Regulations. Advisory opinions issued by the *Board* may be relied upon by the persons requesting them, as well as by any agency, or official of a city, town, or region.

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**4.7 PETITION FOR THE ADOPTION OF REGULATIONS**

Petition: Any interested person or such person's attorney may at any time



**Appeal and Variance**

petition the *Board* to adopt, amend or repeal any regulation. The petition shall be addressed to the *Board* and sent by mail or delivered in person during normal business hours. All petitions shall be signed by the petitioner or the petitioner's attorney, contain the petitioner's address or the address of the petitioner's attorney, and set forth clearly and concisely the text of the proposed regulation. The petition may be accompanied by any supporting data, views or arguments. A member of the *Board* may make a written recommendation that a regulation be adopted, amended or repealed.

- 4.7.1 Initial Procedure: Within sixty (60) days of the receipt of a petition or recommendation, the *Board* shall hold a meeting to determine whether or not to schedule the petition or recommendation for further proceedings in accordance with M.G.L. c. 30A. If the regulation has been presented by petition, the *Board* shall notify the petitioner within ten (10) days after making such a determination.
- 4.7.2 Procedure for the Adoption, Amendment or Repeal of Regulations:
- a. The procedures for the adoption, amendment or repeal of any regulation shall comply with M.G.L. c. 30A.
  - b. Where no public hearing is required, the *Board* may afford any interested person or his duly authorized representative, or both, an opportunity to present data, views or arguments orally before the *Board* during the meeting at which the proposed action is to be considered. If the *Board* finds that such oral presentation is unnecessary or impracticable, it may require written presentation.
  - c. Where a public hearing is required, the *Board* shall afford any interested person or his duly authorized representative, or both, an opportunity to present statements and arguments orally. In its discretion, the *Board* may limit the length of oral presentation.
- 4.7.3 Filing of Regulations: Upon the adoption of a regulation, an attested copy shall be filed with the Secretary of State together with a citation of the statutory authority under which the regulation has been promulgated. The regulation shall take effect upon filing unless a later date is required by law or is specified by the *Board* in the Regulation.

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**Definitions****5.1 - GENERAL**

As used in these Regulations, the following words shall have the meaning set forth in this Section unless the context otherwise requires.

**5.2 ACCESS AISLE:** An accessible pedestrian space between elements such as parking spaces, seating, or desks, that provides clearances complying with these Regulations.

**5.3 ACCESSIBLE:** A site, building, facility or portion thereof that complies with these Regulations and that can be approached, entered, and used by persons with disabilities.

**5.4 ACCESSIBLE ELEMENT:** An element complying with these Regulations that can be used by persons with disabilities (for example, telephone, controls, appliances, equipment and the like).

**5.5 ACCESSIBLE ROUTE:** A continuous, unobstructed path connecting all accessible elements and spaces within or between buildings or facilities. Interior accessible routes may include corridors, floors, ramps, elevators, lifts, and clear floor space at fixtures. Exterior accessible routes may include parking, access aisles, curb cuts, crosswalks at vehicular ways, walks, ramps, and lifts.

**5.6 ACCESSIBLE SPACE:** Space that complies with these Regulations and that can be used by persons with disabilities.

**5.7 ADAPTABILITY:** The ability of certain building spaces and elements, such as kitchen counters, sinks, and grab bars, to be added or altered so as to accommodate the needs of individuals with or without disabilities or with different types or degrees of disability.

**5.8 ADAPTABLE:** Can readily be made accessible to, functional for, and safe for use by persons with disabilities without structural change.

**5.9 ADDITION:** An extension or increase in floor area or height of a building or structure.

**5.10 ADMINISTRATIVE AUTHORITY:** A governmental agency that adopts or enforces regulations for the design, construction, or alteration of buildings and facilities.

**5.11 ALTERATIONS:** A change or modification of a building or structure, or portion thereof, that requires a building permit. Alterations shall include but not be limited to: remodeling, renovation, rehabilitation, reconstruction, historic restoration, changes or rearrangements in the plan configuration or walls and full height partitions, and any repairs which require a building permit.



**Definitions**

Ordinary repairs as defined in Section 780 of the Code of Massachusetts Regulations are not alterations

- 5.12      **AREA OF RESCUE ASSISTANCE:** An area, which has direct access to an ext, where people who are unable to use stairs may remain temporarily in safety to await further instructions or assistance during emergency evacuation.
- 5.13      **ASSEMBLY AREA:** A room or space accommodating a group of individuals for recreational, educational, political, social, or amusement purposes, or for the consumption of food and drink.
- 5.14      **ASSISTIVE LISTENING SYSTEM:** Assistive listening systems are intended to augment standard public address and audio systems by providing signals that can be received directly by persons with special receivers or their own hearing aids and by eliminating or filtering background noise. The type of assistive listening system appropriate for a particular application depends on the characteristics of the setting, the nature of the program, and the intended audience. Magnetic induction loops, infra-red and radio frequency systems are types of listening systems that are appropriate for various applications.
- 5.15      **AUTOMATIC DOOR:** A door equipped with a power-operated mechanism and controls which open and close the door automatically. The switch that begins the automatic cycle may be a photoelectric device, floor mat, or manual switch (see power-assisted door).
- 5.16      **BATHROOM:** A space or a series of interconnected spaces that contain a toilet, sink, and bathtub or shower.
- 5.17      **BOARD:** The Architectural Access Board within the Executive Office of Public Safety, Commonwealth of Massachusetts.
- 5.18      **BUILDING:** A structure enclosed within exterior walls or fire walls, built, erected and framed in a combination of any materials, whether portable or fixed, having a roof, to form a structure for the shelter of persons, animals or property. For the purpose of this definition, "roof" shall include an awning or similar covering, whether or not permanent in nature. The word "building" shall be interpreted, where the context requires, as though followed by the words "or part or parts thereof."
- 5.19      **CHANGE OF USE:** Varying the use of a building from a private use to one that is open to and used by the public.
- 5.20      **CLEAR:** Unobstructed.
- 5.21      **CLEAR FLOOR SPACE:** The minimum unobstructed floor or ground space required to accommodate a single, stationary wheelchair and occupant. Unless otherwise stated, the dimensions of clear floor space shall be thirty

**Definitions**

inches by forty-eight inches (30" by 48" = 762mm by 1219mm).

- 5.22 **CLOSED CIRCUIT TELEPHONE:** A telephone with dedicated line(s), such as a house phone, courtesy phone or phone, that must be used to gain entrance to a facility or project.
- 5.23 **COMPLEX:** Multiple housing developed on one or more sites by a single entity if the sites have one or more of the following in common: architect, contractor, funding source, or building permit.
- 5.24 **COMMON USE:** Refers to those interior and exterior rooms, spaces, or elements that are made available for the use of a restricted group of people (for example, occupants of a homeless shelter, the occupants of an office building, or the guests of such occupants).
- 5.25 **CONSTRUCTION:** Work for which a building permit is required, work determined to be construction by a state or local building inspector, or work for which a certificate of occupancy is necessary upon completion.
- 5.26 **CROSS SLOPE:** The slope that is perpendicular to the *running slope* and the direction of travel.
- 5.27 **CURB CUT:** A short ramp cutting through a curb.
- 5.28 **DETECTABLE WARNING:** A standardized surface feature built in or applied to walking surfaces or other elements to warn visually impaired people of hazards on a circulation path.
- 5.29 **DWELLING UNIT:** A unit providing living facilities for one or more persons. See Section 8 for more detailed information.
- 5.30 **EGRESS, MEANS OF:** A continuous and unobstructed way of exit travel from any point in a building or facility to a public way. A means of egress comprises vertical and horizontal travel and may include intervening room spaces, doorways, hallways, corridors, passageways, balconies, ramps, stairs, enclosures, lobbies, horizontal exits, courts and yards. An accessible means of egress is one that complies with these Regulations and does not include stairs, steps, or escalators. Areas of rescue assistance or evacuation elevators may be included as part of accessible means of egress.
- 5.31 **ELEMENT:** An architectural or mechanical component of a building, facility, space, or site, e.g., telephone, curb cut, door, drinking fountain, seating, or water closet.
- 5.32 **ENTRANCE:** Any access point to a building or portion of a building or facility used for the purpose of entering. An entrance includes the approach walk; stairs, lifts, ramp or other vertical access leading to the entrance platform; the entrance platform itself; vestibules, if provided; the entry door(s) or gate(s); and the hardware of the entry door(s) or gate(s).



**Definitions**

- 5.33 **FACILITY:** All or any portion of buildings, structures, site improvements, complexes, equipment, roads, walks, passageways, parking lots, or other real or personal property located on a site.
- 5.34 **FINAL DECISION:** Determination of the Board, arrived at after consideration of the facts brought to its attention in accordance with these Regulations.
- 5.35 **FULL AND FAIR CASH VALUE OF THE BUILDING:** The assessed valuation of a building as recorded in the Assessor's Office of the municipality at the time the building permit is issued as equalized at one-hundred (100%) valuation; or, if no assessed value exists, either the fair market value or the replacement cost of the building.

The one-hundred percent (100%) equalized assessed value shall be based upon Massachusetts Department of Corporations and Taxation's determination of the particular city's or town's assessment ratio.

**EXAMPLE:** Town X has an assessment ratio of forty percent (40%), the particular building in question is assessed at \$200,000.00; to determine the equalized assessed value of this building, divide \$200,000. 00 by 0.4. The equalized assessed value equals \$500,000.00.

When part of a building is subject to these Regulations, the full and fair cash value shall be based on the percentage of the full and fair cash value of the whole which equals the ratio of the square footage of the part of the building to the square footage of the whole building; if the Board determines the application of this formula to cause an inequitable result, the Board may otherwise calculate the full and fair cash value of the part of a building at issue.

**EXAMPLE:** Where the whole building is 100,000 square feet, the part in question is 10,000 square feet, and the equalized value of the whole is \$1,000,000.00, the full and fair cash value of the part is \$100,000.00.

- 5.36 **GROUND FLOOR:** The floor of a building closest to the level of the exterior grade and any floor within thirty-six inches (36" = 915mm) of an exterior grade at some or all of its perimeter. Buildings on sloped sites may have more than one ground floor. For multiple dwellings with a garage or commercial space at grade level, the first floor of dwelling units above the garage or commercial space shall be considered the ground floor.
- 5.37 **GROUP 1:** Applies to dwelling units that have features that can be modified without structural change to meet the specific functional needs of an occupant with a disability.
- 5.38 **GROUP 2A:** Applies to dwelling units that have features similar to Group 1, but have the additional feature of greater floor space to accommodate the needs of occupants who need such space due to their disability.

**Definitions**

- 5.39 **GROUP 2B:** Applies to dwelling units that contain features that provide, at the time of initial construction, full accessibility without need for further modification.
- 5.40 **HALF BATHROOM:** A space with a toilet and a sink.
- 5.41 **IMPRACTICABILITY:** a) Compliance with the Regulations would be technologically unfeasible, or b) compliance with the Regulations would result in excessive and unreasonable costs without any substantial benefit to persons with disabilities.
- 5.42 **LEVEL:** Sloped no more than 1:50 or two percent (2%)
- 5.43 **LOFT:** An intermediate level between the floor and ceiling of any story, located within a room or rooms of a dwelling.
- 5.44 **MARKED CROSSING:** A crosswalk or other identified path intended for pedestrian use in crossing a vehicular way.
- 5.45 **MEZZANINE OR MEZZANINE FLOOR:** That portion of a story which is an intermediate floor level placed within the story and having occupiable space above and below its floor.
- 5.46 **MULTIFAMILY DWELLING:** Any building containing more than two dwelling units.
- 5.47 **MULTIPLE DWELLING:** A lodging or residential facility for hire, rent, lease, or sale, containing three (3) or more dwelling units.
- 5.48 **OCCUPIABLE:** A room or enclosed space designed for human occupancy in which individuals congregate for amusement, education or similar purposes, or in which occupants are engaged in labor, and which is equipped with means of egress, light, and ventilation.
- 5.49 **OPERABLE PART:** A part of a piece of equipment or appliance used to insert or withdraw objects, or to activate, deactivate, or adjust the equipment or appliance (for example, coin slot, pushbutton, handle).
- 5.50 **ORDINARY REPAIRS:** Any maintenance which does not affect structure, egress, fire protection systems, fire ratings, energy conservation provisions, plumbing, sanitary, gas, electrical or other utilities.
- 5.51 **PERSONS WITH DISABILITIES:** Individuals who experience substantial limitations in one or more major life activities, including but not limited to such functions as performing manual tasks, walking, seeing, hearing, speaking, breathing, learning and working. Persons with disabilities shall include but not be limited to those who have the inability to walk, difficulty walking, hearing disabilities, lack of coordination, reaching and manipulation disabilities



**Definitions**

stamina, difficulty interpreting and reacting to sensory information and extremes in physical size.

- 5.52 **PRIMARY FUNCTION AREA:** A major activity for which the facility is intended. Areas that contain a primary function include, but are not limited to: the customer services lobby of a bank, the dining area of a cafeteria, the meeting rooms in a conference center, as well as offices and all other work areas in which the activities of the public are carried out.
- 5.53 **POWER-ASSISTED DOOR:** A door with a mechanism that helps to open the door or that relieves the opening resistance of a door, upon the activation of a switch or a continued force applied to the door itself.
- 5.54 **PROJECT:** See Complex
- 5.55 **PUBLIC BUILDING:**
- a. A building privately or publicly financed that is open to and used by the public, including but not limited to transportation terminals, institutional buildings, commercial buildings, buildings having places of assembly, hotels, motels, dormitories, parking lots of fifteen (15) or more automobiles, public sidewalks and ways, public areas of apartment buildings and condominiums, public funeral homes, and public rest rooms and public areas of shopping centers and restaurants.
  - b. A building constructed by the Commonwealth or any political subdivision thereof with public funds and open to public use, including but not limited to those constructed by public housing authorities, the Massachusetts Port Authority, the Massachusetts Parking Authority, the Massachusetts Turnpike Authority, the Massachusetts Bay Transportation Authority, and building authorities of any public educational institution or their successors.
- 5.56 **PUBLIC USE:** Describes interior or exterior rooms or spaces that are made available to the general public. Public use may be provided at a building or facility that is privately or publicly owned.
- 5.57 **RAMP:** A walking surface that has a running slope greater than 1:20.
- 5.58 **REPAIR:** The reconstruction or renewal of any part of an existing building for the purpose of its maintenance.
- 5.59 **RUNNING SLOPE:** The slope that is parallel to the direction of travel and perpendicular to the *cross slope*.
- 5.60 **REASONABLE MODIFICATION:** Physical changes to multiple dwellings requested by persons with disabilities or their agents to enable full use and enjoyment thereof, as described in M.G.L., c. 151B, Section 4(7a), Chapter 722 of the Acts of 1989.



**Definitions**

- 5.61 **RECONSTRUCTION:** The tearing down, removal, demolition or replacement of a public building or part of a public building.
- 5.62 **REMODELING:** Modification beyond an interior decoration or involving any structural changes, or the redecorating of a public building for which the cost of such refurbishing, updating or redecorating equals or exceeds five percent (5%) of the full and fair cash value of the building.
- 5.63 **SERVICE ENTRANCE:** An entrance intended primarily for delivery of goods or services.
- 5.64 **SIDEWALK:** A prepared walk within a street right of way.
- 5.65 **SIGNAGE:** Displayed verbal, symbolic, tactile, and pictorial information.
- 5.66 **SITE:** A parcel of land bounded by a property line, or a designated portion of a public right-of-way.
- 5.67 **SITE IMPROVEMENT:** Landscaping, paving for pedestrian and vehicular ways, outdoor lighting, recreational facilities, and the like, added to a site.
- 5.68 **SLEEPING ACCOMMODATIONS:** Rooms in which people sleep; for example, dormitory and hotel or motel guest rooms or suites.
- 5.69 **SLIP RESISTANT:** A condition in which the static coefficient of friction on a walking surface under conditions likely to be found on the surface is 0.6 for accessible routes and 0.8 for ramps.
- 5.70 **SPACE:** A definable area, e.g., room, toilet room, hall, assembly area, entrance, storage room, alcove, courtyard, or lobby.
- 5.71 **STORY:** That portion of a building included between the upper surface of a floor and upper surface of the floor or roof next above. If such portion of a building does not include occupiable space, it is not considered a story for the purposes of these Regulations. There may be more than one floor level within a story as in the case of a mezzanine or mezzanines.
- 5.72 **STRUCTURAL FRAME:** The structural frame shall be considered to be the columns and the girders, beams, trusses and spandrels having direct connections to the columns and all other members that are essential to the stability of the building as a whole.
- 5.73 **STRUCTURAL CHANGE:** Structural change includes major reconstruction of walls or partitions or relocation of bearing walls or partitions. Minor alterations including the opening of sections of walls and/or the relocation of equipment or fixtures is not considered a structural change.

**Definitions**

- 5.74 **STRUCTURAL STRENGTH:** Structural strength of grab bars, shower seats, fasteners and mounting devices shall be as follows:
1. Bending stress in a grab bar or seat induced by the maximum bending moment from the application of 250 ft. lbs. shall be less than the allowable stress for the material of the grab bar or seat.
  2. Shear stress induced in a grab bar or seat by the application of 250 ft. lbs. shall be less than the allowable shear stress for the material of the grab bar or seat. If the connection between the grab bar or seat and its mounting bracket or other supports is considered to be fully restrained, then direct and torsional shear stresses shall be totaled for the combined shear stress, which shall not exceed the allowable shear stress.
  3. Shear force induced in a fastener or mounting device from the application of 250 ft. lbs. shall be less than the allowable lateral load of either the fastener or mounting device or the supporting structure, whichever is the smaller allowable load.
  4. Tensile force induced in a fastener by direct tension force of 250 ft. lbs. plus the maximum moment from the application of 250 ft. lbs. shall be less than the allowable withdrawal load between the fastener and the supporting structure.
  5. Grab bars shall not rotate within their fittings.
- 5.75 **TACTILE:** Describes an object that can be perceived using the sense of touch.
- 5.76 **TACTILE WARNING:** A surface texture applied to or built into walking surfaces or other elements to warn visually impaired persons of hazards in the path of travel.
- 5.77 **TELECOMMUNICATION DEVICES FOR THE DEAF:** Machinery or equipment that employs interactive graphic (i.e., typed) communications through the transmission of coded signals across the standard telephone network. These devices are also known as TDD's, TTY's and Text Telephones.
- 5.78 **TOWNHOUSE:** A dwelling unit with finished living space on more than one story.
- 5.79 **TRANSIENT LODGING:** A building, facility, or portion thereof, excluding inpatient medical care facilities, that contains one or more dwelling units or sleeping accommodations not intended for permanent residence. Transient lodging may include but is not limited to resorts, group homes, hotels, motels, and dormitories.
- 5.80 **USE:** Purpose for which the building is designed, used or intended to be used.
- 5.81 **VEHICULAR WAY:** A route intended for vehicular traffic, such as a street, driveway, or parking lot.



**Definitions**

- 5.82 **WALK (WALKWAY):** An exterior pathway with a prepared surface intended for pedestrian use, including general pedestrian areas such as plazas, courts and crosswalks.
- 5.83 **VARIANCE:** Modification of or substitution for a Rule or Regulation.
- 5.84 **ZONE OF REACH:** An operable mechanism is within reach if it meets one of the following two criteria:
1. The **FORWARD REACH ZONE** from a wheelchair is between fifteen inches and forty-eight inches (15" = 381mm and 48" = 1219mm) above the floor if a clear floor area of thirty inches by forty-eight inches (30" by 48" = 762mm by 1219mm) is provided in front of the control with the thirty inch dimension parallel to the wall.
  2. The **SIDE REACH ZONE** from a wheelchair is between nine inches and fifty-four inches (9" = 229mm and 54" = 1372mm) above the floor, if clear floor area of thirty inches by forty-eight inches (30" by 48" = 762mm by 1219mm) is provided with the forty-eight inch dimension parallel to the wall. If the side reach is over an obstruction of up to thirty-four inches (34" = 864mm) high and twenty-four inches (24" = 610mm) in depth such as a counter, the zone is reduce to forty-six inches (46" = 1168mm).



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## Space Allowance and Reach Ranges

### 6.1 WHEELCHAIR PASSAGE WIDTH

The minimum clear width for single wheelchair passage shall be thirty-four inches (34" = 864mm) at a point, not to exceed twenty-four inches in length (24" = 610mm), and thirty-six inches (36" = 914mm) continuously. See Fig. 6a.

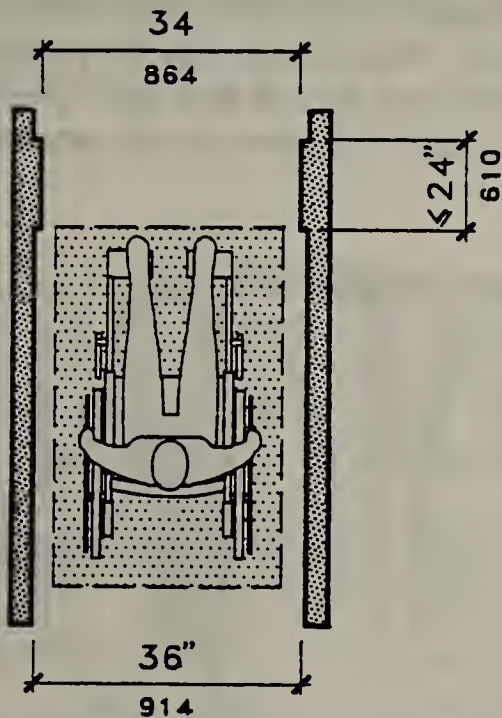


Figure 6a

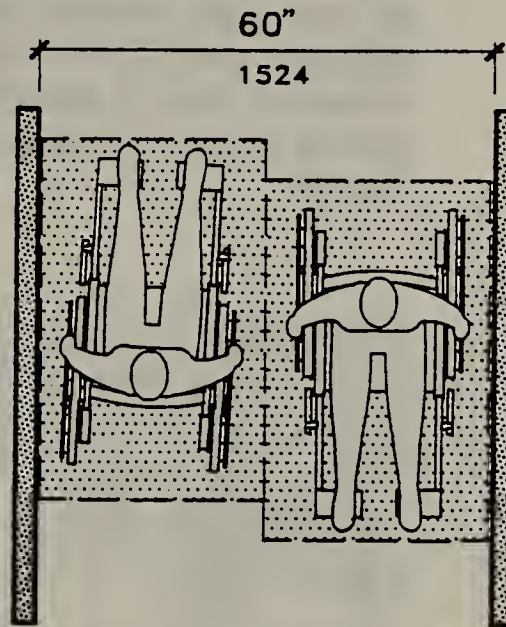


Figure 6b

### 6.2 WIDTH FOR WHEELCHAIR PASSING

The minimum width for two wheelchairs to pass is sixty inches (60" = 1524mm). See Fig. 6b.

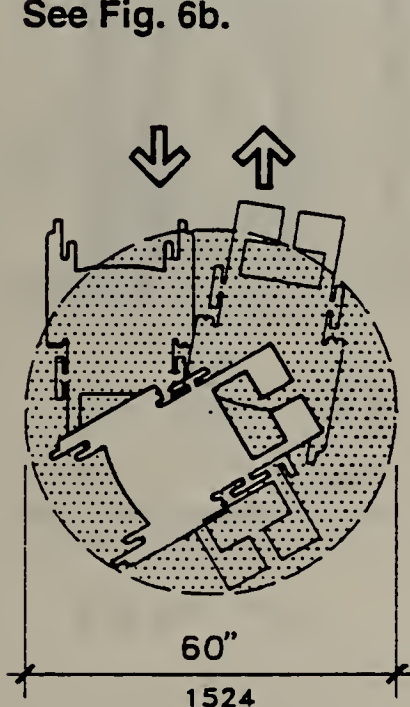


Figure 6c

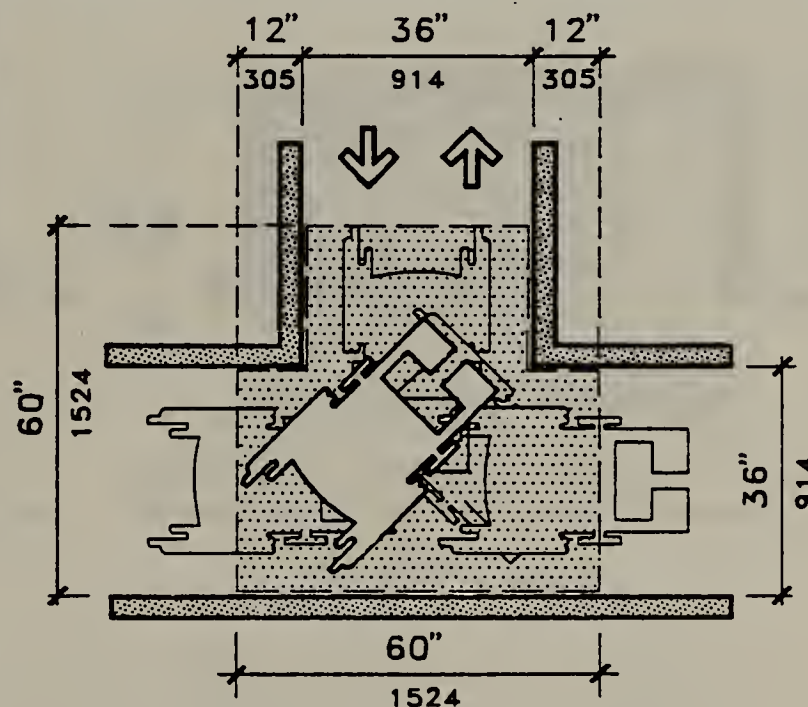


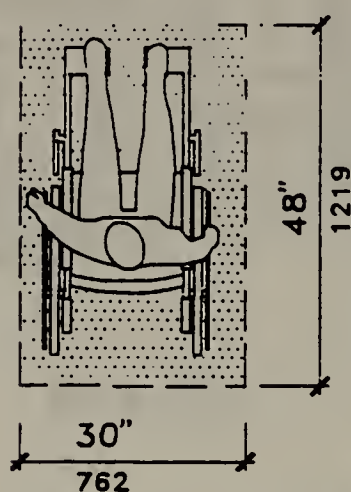
Figure 6d

### 6.3 WHEELCHAIR TURNING SPACE

The space required for a wheelchair to make a 180-degree turn is a clear space of sixty inches (60" = 1524mm) diameter (See Fig. 6c) or a T-shaped space. See Fig. 6d.

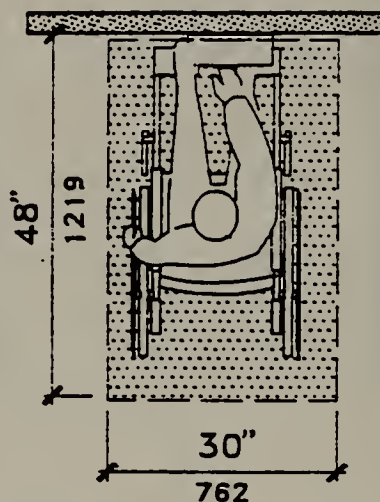
**Space Allowance and Reach Ranges****6.4 CLEAR FLOOR OR GROUND SPACE FOR WHEELCHAIRS**  
shall comply with the following:

- 6.4.1 **Size and Approach:** The minimum clear floor or ground space required to accommodate a single, stationary wheelchair and occupant is thirty inches by forty-eight inches (30" x 48" = 762mm x 1219mm) (See Fig. 6e). The minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object (See Fig. 6f and 6g). Clear floor or ground space for wheelchairs may be part of the knee space required under objects.



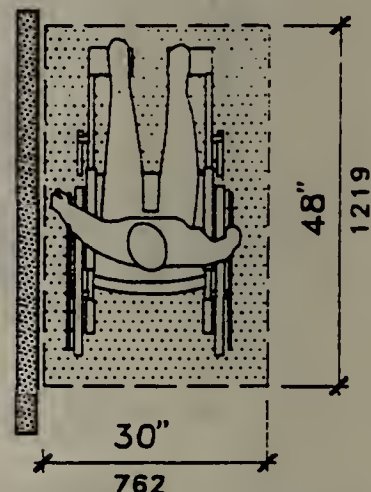
Clear Floor Space

Figure 6e



Forward Approach

Figure 6f



Parallel Approach

Figure 6g



## Space Allowances and Reach Ranges

- 6.4.2 -Relationship of Maneuvering Clearance to Wheelchair Spaces: One full unobstructed side of the clear floor or ground space for a wheelchair shall adjoin or overlap an accessible route or adjoin another wheelchair clear floor space. If a clear floor space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances shall be provided as shown in Fig. 6h and 6j.

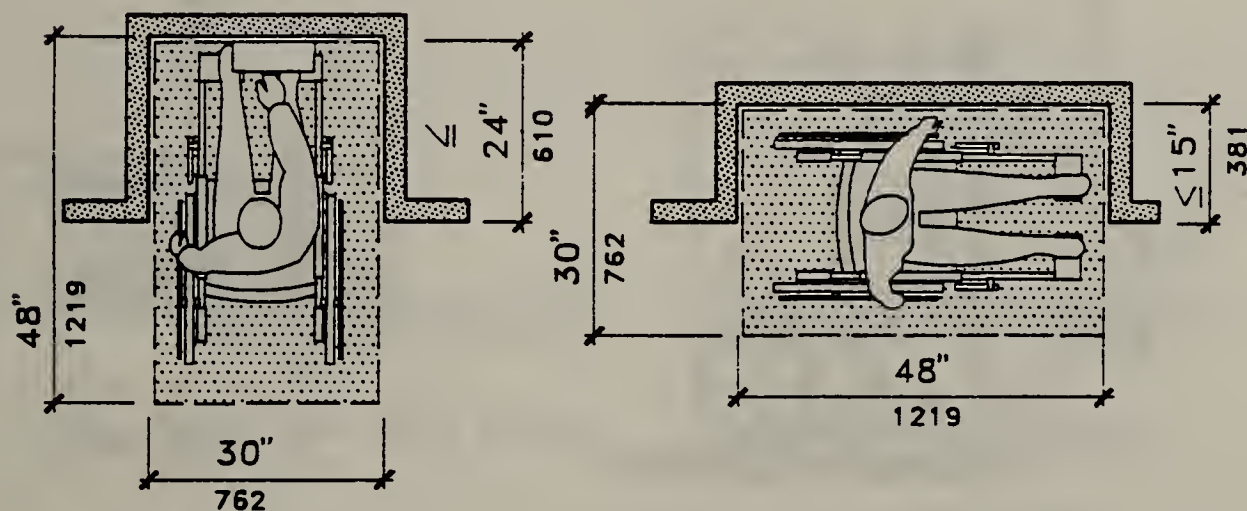
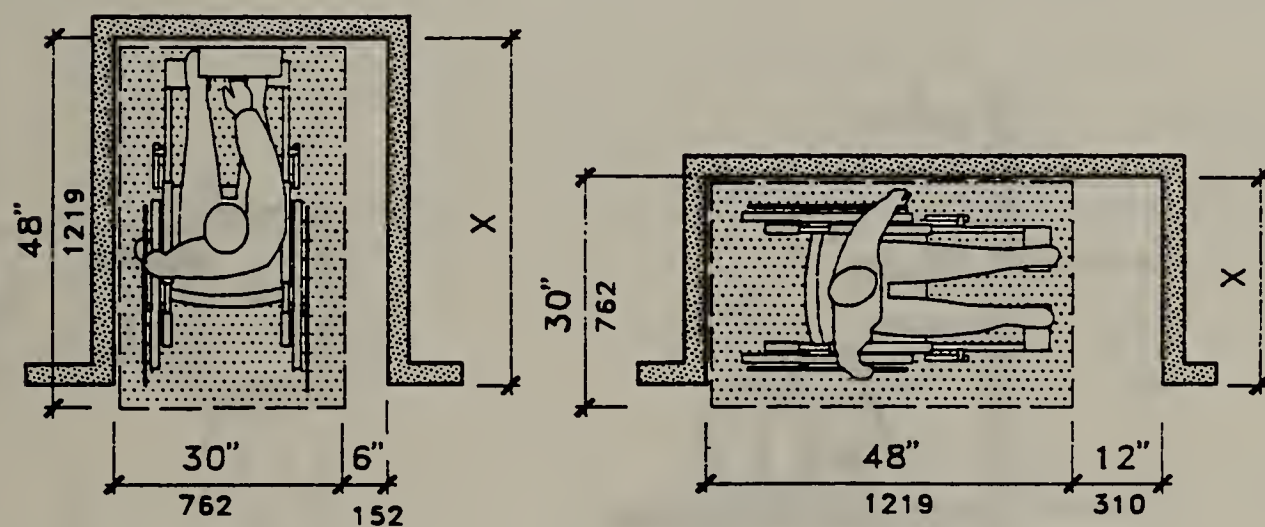


Figure 6h



If  $X > 24"$  (610 mm)  
add maneuvering clearance  
of 6" (153mm)

NOTE: If  $x > 15"$  (381 mm) add  
maneuvering clearance of 12 inches.

Figure 6j

## Space Allowances and Reach Ranges

- 6.4.3 Surfaces for Wheelchair Spaces: Clear floor or ground spaces for wheelchairs shall comply with **Section 29, Floor Surfaces**.

### 6.5 FORWARD REACH

If the clear floor space only allows forward approach to an object, the maximum high forward reach allowed shall be forty-eight inches (48" = 1219mm) (See Fig. 6k). The minimum low forward reach is fifteen inches (15" = 381mm). If the high forward reach is over an obstruction, reach and clearances shall be as shown in Fig. 6l.

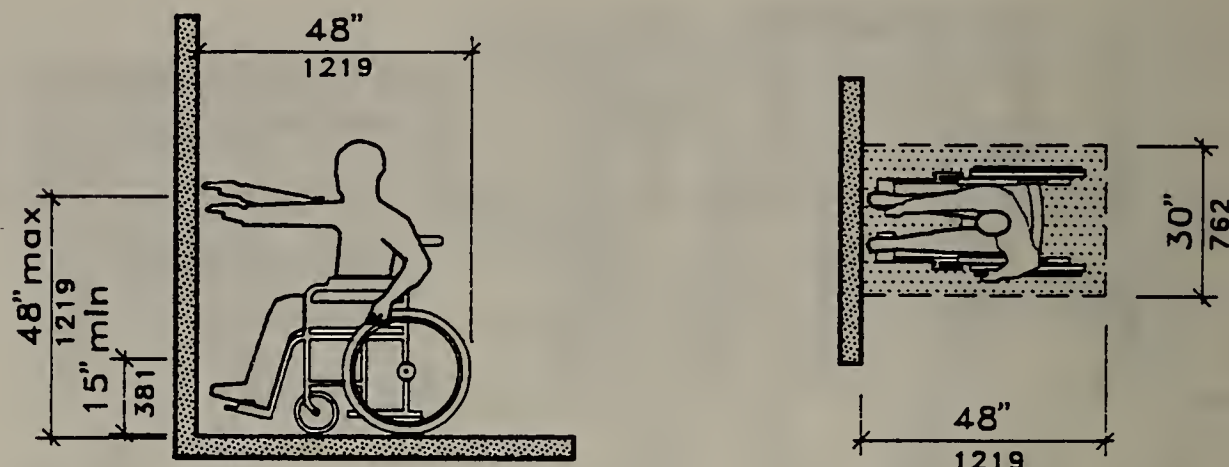
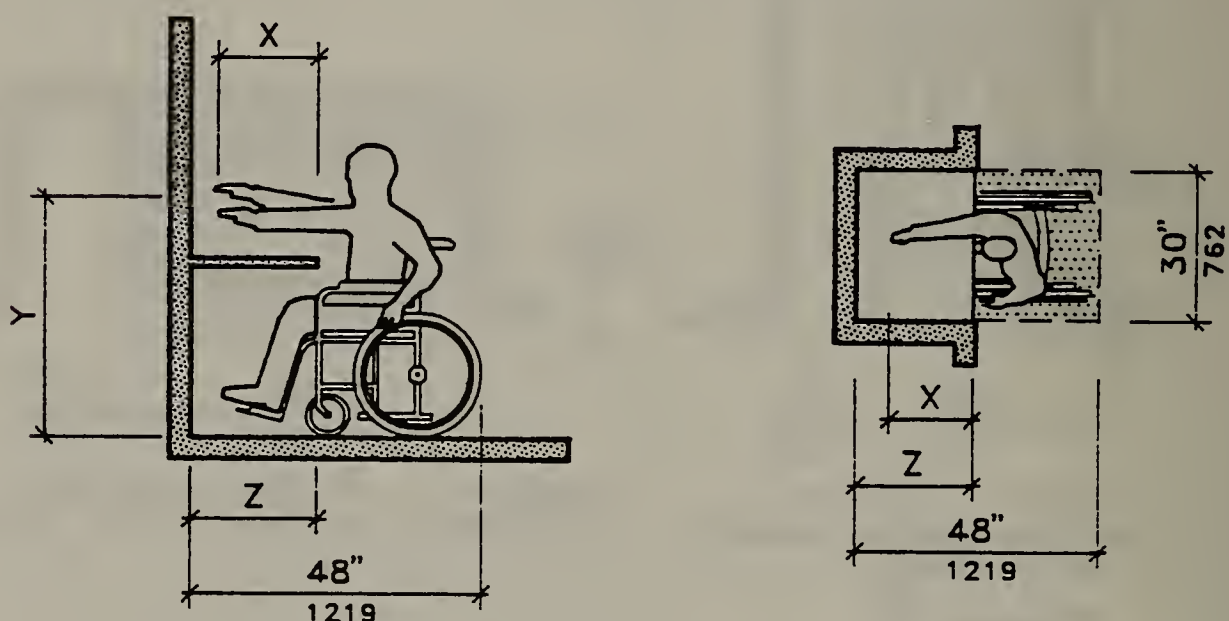


Figure 6k  
High Forward Reach Limit



NOTE:  $x$  shall be  $\leq 25$  in (635);  $z$  shall be  $> x$ .  
When  $x < 20$  in. (510mm), then  $y$  shall be 48 in. (1219) maximum.  
When  $x$  is 20 to 25 in. (508mm to 635mm), then  $y$  shall be 44 in. (1118) maximum.

Figure 06l  
Maximum Forward Reach over an Obstruction

## Space Allowances and Reach Ranges

## 6.6

**SIDE REACH**

If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be fifty-four inches (54" = 1372mm) and the low side reach shall be no less than nine inches (9" = 229mm) above the floor (See Fig. 6m). If the side reach is over an obstruction, the reach and clearances shall be as shown in Fig. 6n.

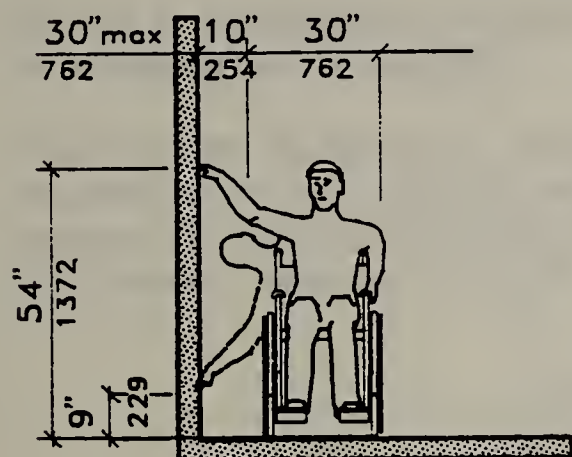


Figure 6m  
High and Low Side Reach

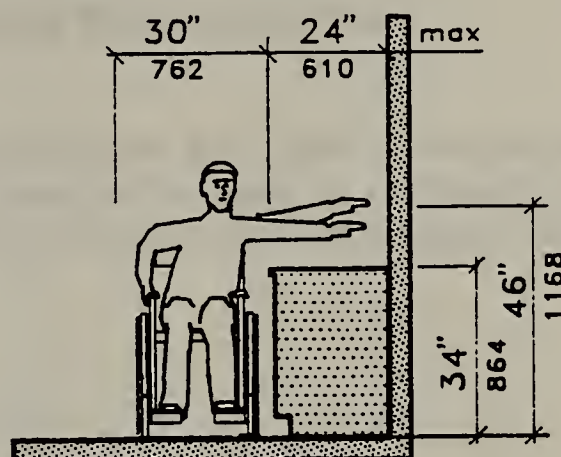


Figure 6n  
Maximum Side Reach  
over Obstruction



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## Retail Establishments

### 7.1 GENERAL

All retail establishments shall comply with these Regulations, except as specified or modified in this Section. Retail establishments shall include, but not be limited to, banks, beauty shops, pharmacies, dry cleaners, clothing stores, grocery stores and supermarkets. Areas that must be *accessible* include but are not limited to the areas where the service or product of the establishment is offered to the public, dressing rooms, and public toilet rooms provided for clientele.

### 7.2 SALES SERVICE AND INFORMATION, OR TELLER WINDOWS

Shall comply with the following:

- 7.2.1 Cash register transactions: In department stores and retail stores where counters have cash registers and are provided for sales or distribution of goods or services to the public, at least one of each type shall comply with the following. See Fig. 7a and 7b.

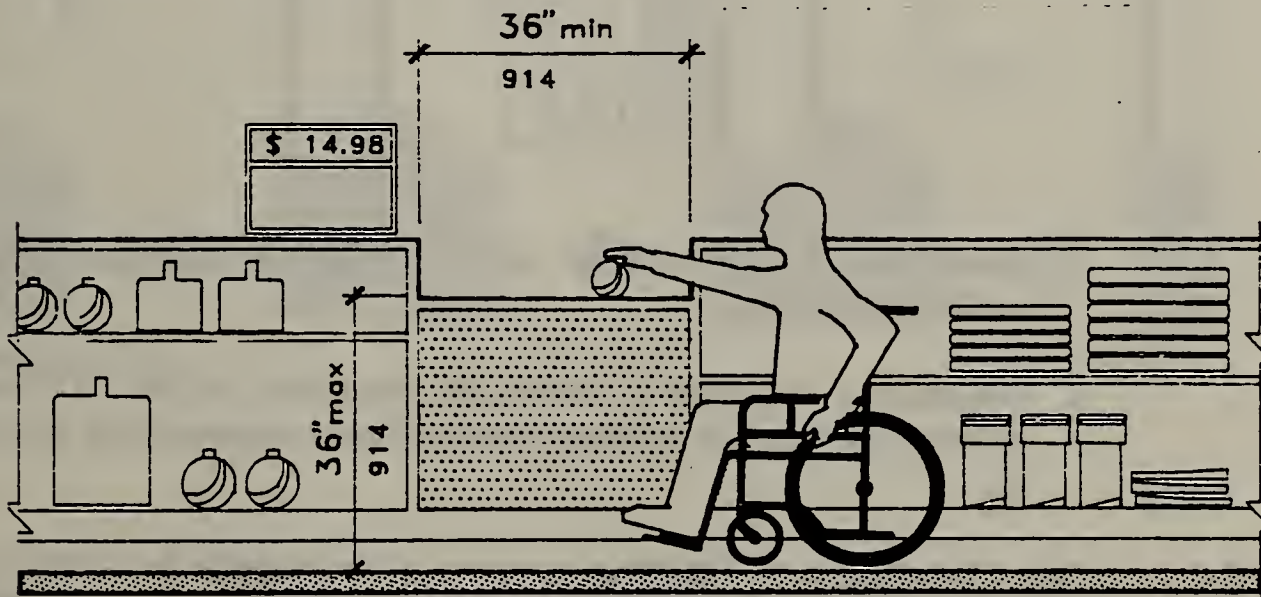


Figure 7a

Elevation of Counter

- Location: The counter shall be on an *accessible route* complying with **Section 20, Accessible Route**.
- Length: A portion of the counter shall be at least thirty-six inches (36" = 914mm) in length.
- Height: That portion of the counter shall not exceed thirty-six inches (36" = 914mm) above the finish floor.

## Retail Establishments

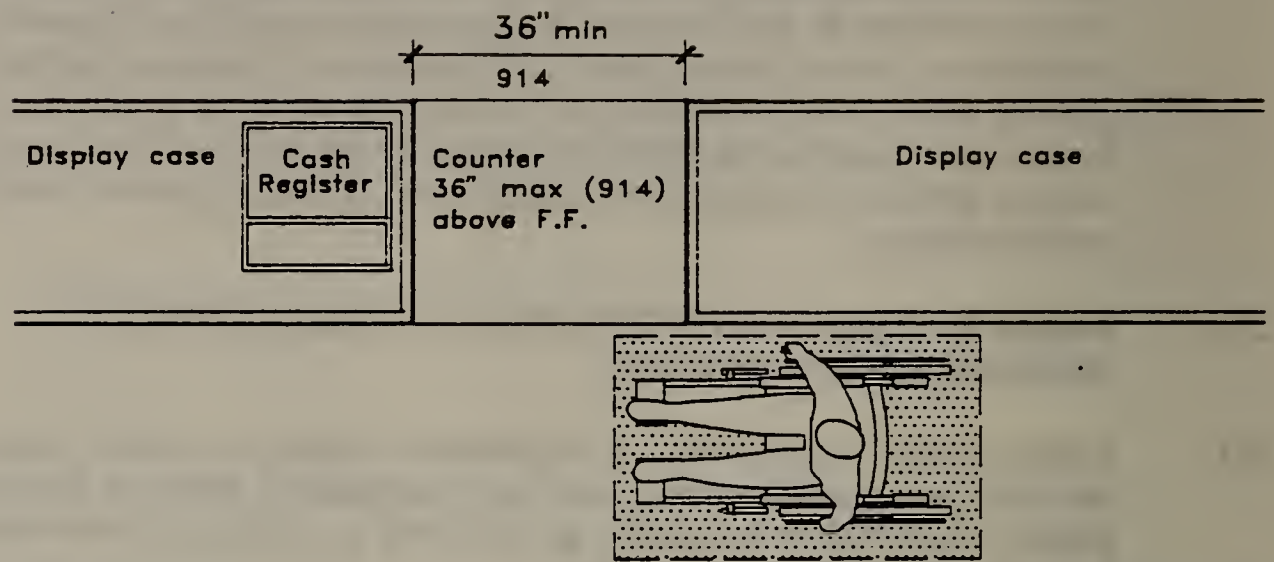


Figure 7b

Plan of Counter

- d. **Distribution:** The *accessible* counters must be dispersed throughout the *building or facility*.
- e. **Alterations:** Where it is technically infeasible to provide an *accessible* counter, an auxiliary counter meeting these requirements may be provided.

## 7.2.2

**Other Transactions:** Ticketing counters, teller stations in a bank, registration counters in hotels and motels, box office ticket counters, and other counters that may not have a cash register but at which goods or services are sold or distributed, shall comply with the following. See Fig. 7a and 7b.

- a. **Location:** The counter shall be on an *accessible route* complying with **Section 20, Accessible Route**.
- b. **Length:** The *accessible* portion of the counter or an auxiliary counter shall be at least thirty-six inches (36" = 914mm) in length.
- c. **Height:** The counter shall not exceed thirty-six inches (36" = 914mm) above the finish floor.

## 7.2.3

**Assistive Listening Devices.** (Reserved)

## 7.3

 **AISLES**

All aisles in retail establishments shall have a minimum *clear* width of thirty-six inches (36" = 914mm).



## Retail Establishments

## 7.4 CHECK-OUT AISLES

Shall comply with the following:

- 7.4.1 Width: All check-out lanes shall have a minimum *clear* width of thirty-two inches (32" = 813mm). See Fig. 7c.

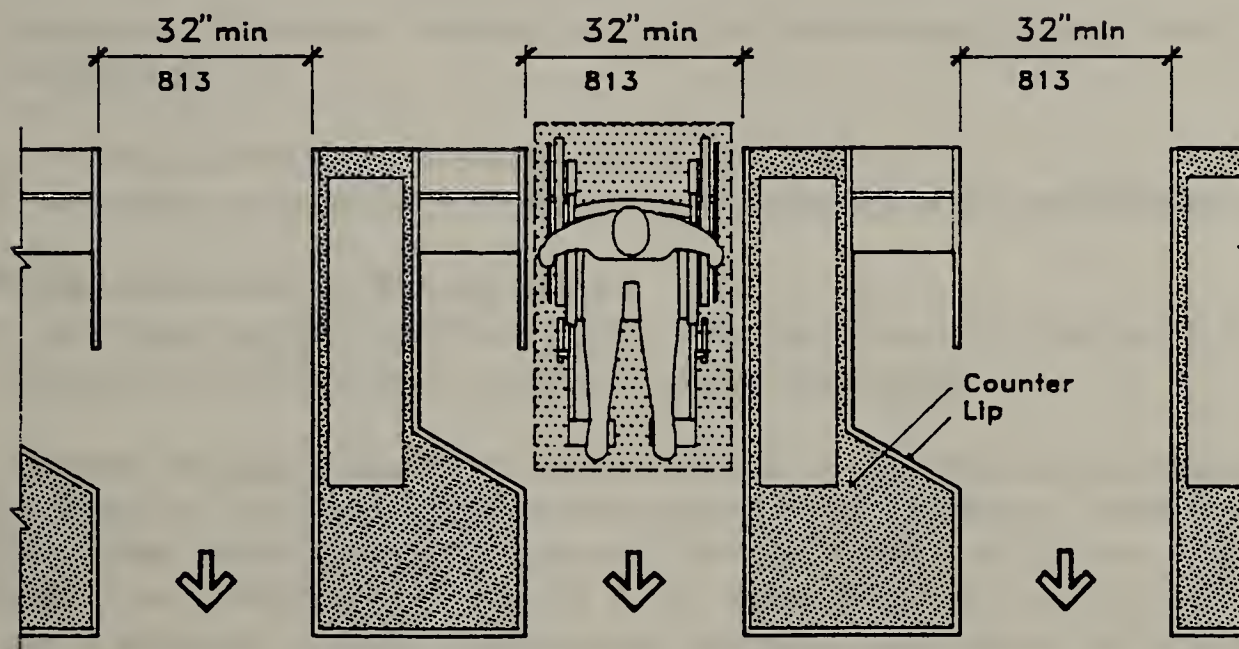


Figure 7c

- 7.4.2 Height: Maximum adjoining counter height shall not exceed thirty-eight inches (38" = 965mm) above the finish floor. The top of the lip shall not exceed forty inches (40" = 1016mm) above the finish floor.

- 7.4.3 Identification: *Signage* identifying *accessible* check-out aisles shall use the international symbol of accessibility and shall be mounted above the check-out aisle in the same location that the check-out number or type of check-out is displayed.

## 7.5 SHOPPING CART BARRIERS

Wherever barriers are provided to prevent the removal of shopping carts from store premises, including but not limited to turnstiles, an adjacent, alternate unlocked gate or door that is equally convenient to that provided for the ambulatory population shall be provided. It shall have a minimum *clear* opening of thirty-four inches (34" = 864mm).

## 7.6 DRESSING ROOMS

Where provided, dressing rooms shall comply with Section 33, Changing Rooms.

**Retail Establishments**

**7.7 SHELVING AND DISPLAY UNITS**

In retail establishments shelving and display units shall be located on an *accessible route*. The requirements of Sections 6.5, Forward Reach and 6.6 Side Reach shall not apply.

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**7.8 PUBLIC TOILET ROOMS**

Shall be *accessible* , on an *accessible route*, and in compliance with Section 30, Public Toilet Rooms.

## Transient Lodging Facilities

### 8.1 GENERAL

*Transient lodging* facilities shall comply with these Regulations, except as specified or modified in this Section. *Transient lodging* shall include but not be limited to hotels, motels, inns, boarding houses, dormitories, resorts, homeless shelters, halfway houses and transitional housing, and other places that provide temporary accommodation. *Transient lodging* includes facilities, or portions thereof, used for *sleeping accommodations*. *Sleeping accommodations* in a medical care facility are covered by Section 13, Medical Care Facilities.

Exception: This section does not apply to an establishment located within a *building* that:

- a. contains five or fewer rooms for rent or hire; and
- b. is actually occupied as a residence by the proprietor of the establishment.

### 8.2 PUBLIC AND COMMON USE AREAS

In *transient lodging* facilities, *public* and *common use* areas shall be designed and constructed to comply with these Regulations.

8.2.1 General: The *public use* areas in hotels, motels or inns shall include but not be limited to: the general public function areas, recreation areas, health facilities, pools, meeting areas, restaurants, lounges, public toilet rooms, public telephones, vending areas, laundry rooms, other amenities installed for the use of occupants, *walks*, elevators, and all public *entrances* as well as the stairs and corridors leading to the *accessible* units.

8.2.2 Elevators: Where elevators are not required, amenities on inaccessible floors are not required to be *accessible* as long as one of each type is provided in *common use* areas on *accessible* floors.

8.2.3 Registration counters shall comply with the following:

- a Location: The counter shall be on an *accessible route*.
- b Length: A portion of the counter or an auxiliary counter shall be at least thirty-six inches (36" = 914mm) in length.
- c Height: That portion of the counter shall not exceed thirty-six inches (36" = 914 mm) above the finish floor.
- d Clear Floor Area: Shall be provided in front of the counter.

### 8.3 UNITS, SLEEPING ROOMS, AND SUITES

At least five percent (5%) but in no case less than one (1) of the units, sleeping rooms, and suites shall be *accessible*.

In applying the five percent (5%) rule to facilities which consist of more than one *building*, all of the units in the entire *facility* shall be added together.

8.3.1 Distribution: To provide *persons with disabilities* a range of options equivalent to those available to other persons served by the *facility*, *accessible*



## Transient Lodging Facilities

sleeping rooms and suites shall be dispersed proportionally among the various classes of *sleeping accommodations* available to patrons of the place of *transient lodging*. Factors to be considered include room size, price, location, amenities provided, and the number and size of beds provided.

- 8.3.2 **Equivalent Facilitation:** The operator of a *facility* may elect to limit *construction* of *accessible* rooms to those intended for multiple occupancy, provided that these rooms are made available at the cost of a single occupancy room to an individual with disabilities who requests a single-occupancy room.
- 8.3.3 **Bathrooms and Kitchens:** *Accessible* units shall have *bathrooms* and *kitchens* (where provided), that comply with *Group 2B* requirements in **Sections 31, Bathing Rooms** and **32, Kitchens**.
- 8.3.4 **Hotels:** In hotels of 50 or more sleeping rooms or suites, additional *accessible* sleeping rooms or suites that include a roll-in shower shall also be provided in conformance with the table below. Roll-in showers shall comply with the requirements of **Section 44.6.2, Showers**.

<u>Number of rooms</u>	<u>Rooms with Roll-in Showers</u>
50 to 75	1
76 to 100	1
101 to 150	2
151 to 200	2
201 to 300	3
301 to 400	4
401 to 500	4, plus one for each additional 100 over 400
501 to 1000	2% of total
1001 and over	20 plus 1 for each 100 over 1000

- 8.3.5 **Sleeping accommodations for Persons with Hearing Impairments.** In all *transient lodging* facilities, additional *accessible* sleeping rooms and suites with accommodations for persons with hearing impairments shall be provided in conformance with the table below. These rooms and suites shall comply with the requirements of **Section 8.5**.

<u>Number of Rooms</u>	<u>Accessible Rooms</u>
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8

## Transient Lodging Facilities

401 to 500	9
501 to 1000	2% of total
1001 and over	20 plus 1 for each 100 over 1000

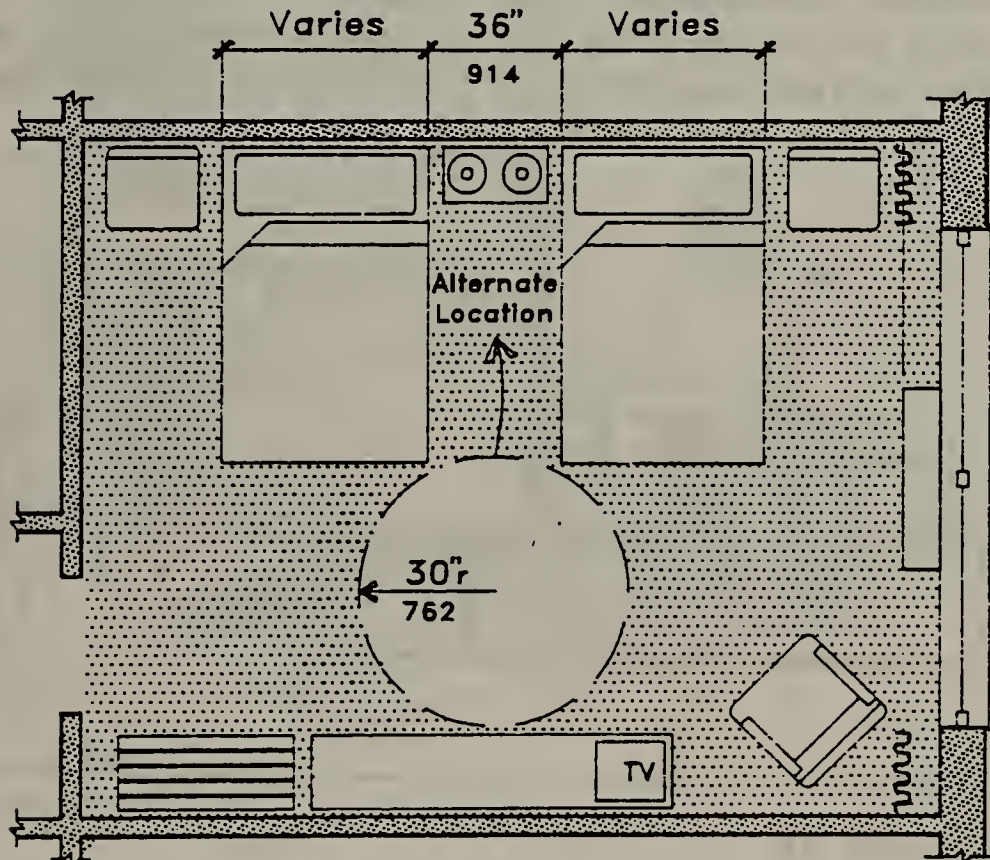
- 8.3.6 In facilities with multi-bed rooms or spaces, five percent (5%) of the beds shall comply with **Section 8.4.2**.

### 8.4 MINIMUM REQUIREMENTS

*Accessible* units, sleeping rooms and suites shall comply with the following:

- 8.4.1 *Accessible Route:* *Accessible* units, sleeping rooms, and suites shall be on an *accessible route*. An *accessible route* shall connect all *accessible* spaces and *elements* including telephones within the unit, sleeping room, or suite. An elevator is not required in multi-story units if the spaces identified in **Section 8.3.6** are on *accessible* levels and the *accessible* sleeping area is suitable for dual occupancy.

- 8.4.2 *Maneuvering Space:* *Accessible* sleeping rooms shall have a thirty-six inch (36" = 914mm) *clear width maneuvering space* located along both sides of a bed, except that where two beds are provided, this requirement can be met by providing a thirty-six inch (36" = 914mm) wide *maneuvering space* located between the two beds as shown in **Fig. 8a**.



**Accessible Sleeping Rooms**  
**Figure 8a**



**Transient Lodging Facilities**

- 8.4.3 Doors and doorways designed to allow passage into and within all *accessible* units, sleeping rooms, or suites shall comply with **Section 26, Doors and Doorways**.
- 8.4.4 Storage: If fixed or built-in storage such as cabinets, shelves, closets, and drawers are provided in *accessible* spaces, at least one of each type of storage *space* shall comply with **Section 34, Storage**.
- 8.4.5 Controls: All controls in *accessible* units, sleeping rooms, and suites shall comply with **Section 39, Controls**.
- 8.4.6 *Accessible* spaces: Where provided as part of an *accessible* unit, sleeping room, or suite, the following spaces shall be *accessible* and shall be on an *accessible route*:
- a. the living area
  - b. the dining area
  - c. at least one sleeping area
  - d. at least one *bathroom*
  - e. if only half baths are provided, at least one *half bath*
  - f. carports, garages or parking spaces.
- 8.4.7 Patios, Terraces, and Balconies: Where it is necessary to utilize a door threshold or a change in *level* greater than one-half inch ( $1/2'' = 13\text{mm}$ ) to protect the integrity of the unit from water or snow damage, equivalent facilitation such as raised decking or a *ramp* shall be provided. **See Fig. 8b.**

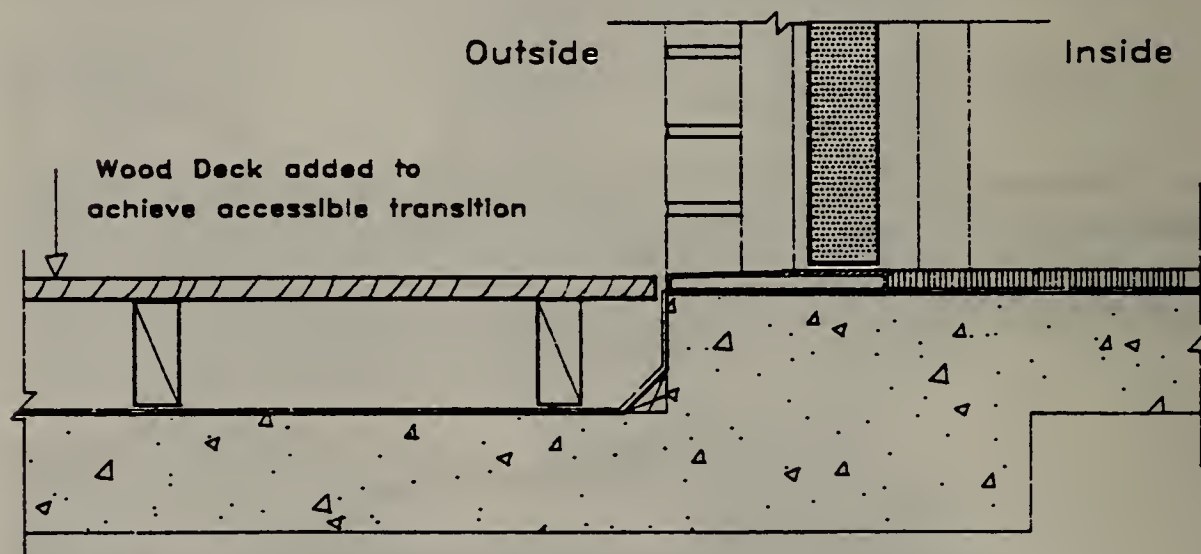


Figure 8b



## Transient Lodging Facilities

- 8.4.8 Kitchenettes: When provided, kitchens and kitchenettes in *accessible* units, sleeping rooms, and suites shall comply with the requirements for *Group 2B* Kitchens in **Section 45, Kitchens**.
- 8.4.9 Wet Bars: When provided as an accessory to an *accessible* unit, sleeping room or suite, wet bars or similar amenities shall be *accessible* and comply with the following:
- Clear floor space* for a front or parallel approach to cabinets, counters, sinks, and appliances shall be provided to comply with **Fig. 8c**.
  - Mounting height for countertops and sinks shall be at a maximum height of thirty-four inches (34" = 864mm) above the floor.
  - Accessible* storage: At least fifty percent of shelf *space* in cabinets or refrigerator/freezers shall comply with **Sections 6.5, Forward Reach** and **6.6, Side Reach** and *space* shall be designed to allow for the operation of cabinet and/or appliance doors so that all cabinets and appliances are *accessible* and usable.
  - Controls and operating mechanisms shall comply with **Section 39, Controls**.

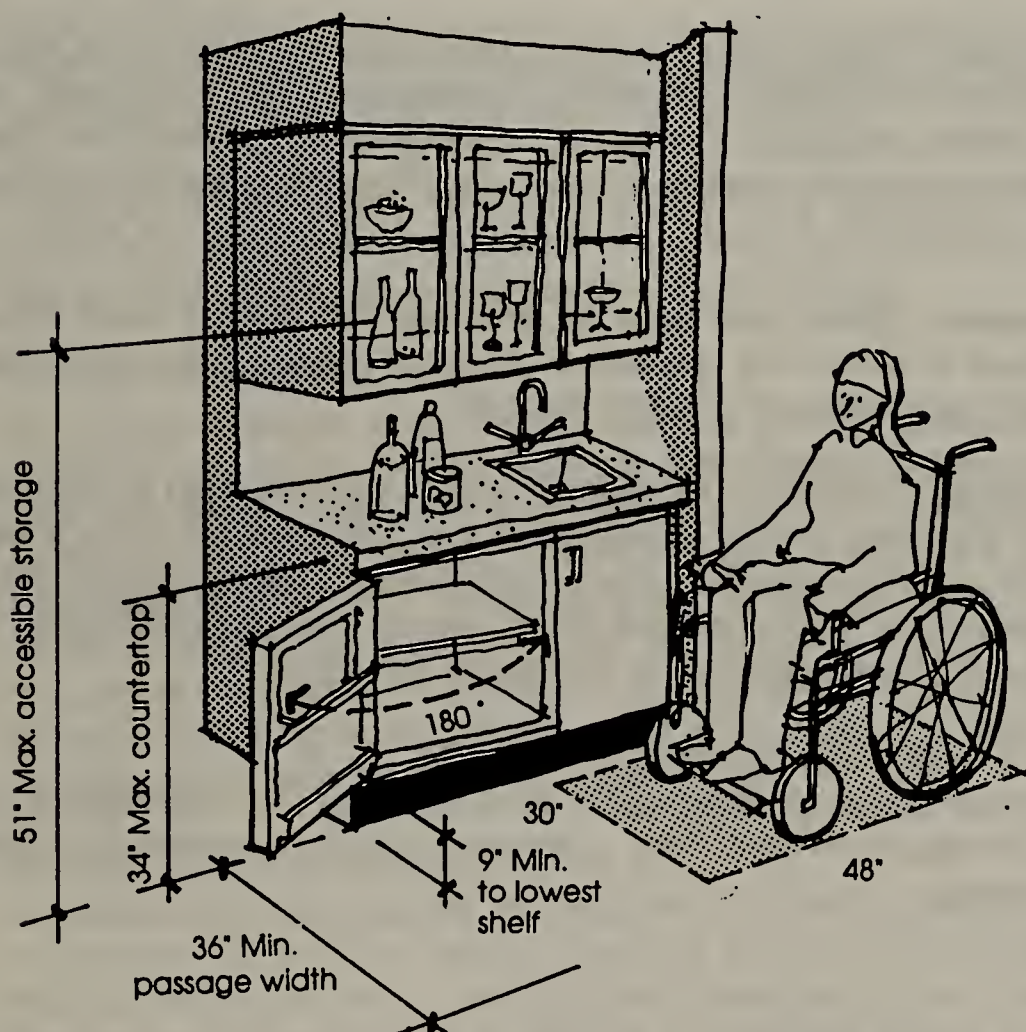


Figure 8c

**Transient Lodging Facilities**

**8.5 SLEEPING ACCOMMODATIONS**

*Sleeping accommodations* for persons with hearing impairments required by **Section 8.3.5** shall comply with the following requirements for visual alarms, notification devices, and telephones.

8.5.1 Auxiliary Visual Alarms: *Sleeping accommodations* shall be equipped with one of the following:

- a. a visual alarm connected to the *building* emergency alarm system; or
- b. a standard 110-volt electrical receptacle into which such an alarm can be connected and a means by which a signal from the *building* emergency alarm system can trigger such an auxiliary alarm.

The visual alarm signal shall be visible in all areas of the unit or room. Instructions for use of the auxiliary alarm or receptacle shall be provided.

8.5.2 Visual Notification Devices shall be provided in *sleeping accommodations* to alert room occupants of incoming telephone calls and a door knock or doorbell. Visual notification devices shall not be connected to auxiliary visual alarm signal appliances.

8.5.3 Telephones: Permanently installed telephones shall have volume controls complying with **Section 37, Public Telephones**. An *accessible* electrical outlet within forty-eight inches (48" = 1219mm) of a telephone connection shall be provided to facilitate the use of a *Telecommunications Device for the Deaf*.

8.5.4 Televisions: Where televisions are provided in five (5) or more units, sleeping rooms or suites, the operator of the *facility* shall provide, upon request, a television amplifier and a caption decoder.

8.5.5 Equivalent Facilitation: The operator of a *facility* may elect to install electrical outlets (including outlets connected to a facility's central alarm system) and telephone wiring in sleeping rooms and suites to enable persons with hearing impairments to utilize portable visual alarms and communication devices, which shall be provided by the operator of the *facility*.

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**8.6 OTHER SLEEPING ROOMS AND SUITES**

Doors and doorways designed to allow passage into and within all sleeping units or other covered units shall comply with **Section 26, Doors and Doorways**.



**Multiple Dwellings****9.1 GENERAL**

A *multiple dwelling* is either a lodging facility or a residential facility for hire, rent, lease, or sale containing three (3) or more *dwelling units* in a *building*. Facilities used for temporary accommodations may be *transient lodging facilities*. See Section 8, Transient Lodging Facilities.

9.1.1 A lodging facility is a *building* or a portion of a *building*, primarily used for the purpose of *sleeping accommodations*. Lodging facilities shall include but not be limited to nursing homes, group homes, and congregate facilities. A *dwelling unit* in a lodging facility is defined as the sleeping space provided to a single individual; i.e., a bedroom or, if the bedroom is shared, a bed.

9.1.2 A residential facility is a *building* or *buildings* consisting of *dwelling units* each of which provides complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation. When a *dwelling unit* houses more than three (3) lodgers or boarders it is a lodging facility. Residential facilities shall include but not be limited to apartments, condominiums, and cooperatives.

**9.2 APPLICABILITY**

New construction: *Multiple dwellings*, with building permits for new construction, issued on or after (8 months after the effective date of these regulations) shall meet the requirements of Sections 9.3 and 9.4.

9.2.1 Renovation and reuse: Any *building* previously occupied for any purpose, which is converted or renovated for residential use after this date is not subject to Section 9.3, however, Section 9.4 would apply.

**9.3 GROUP 1 DWELLING UNITS**

In *multiple dwellings*, where building permits for new construction are issued on or after (8 months after the effective date of these regulations), that are for rent, hire, lease or sale and that are equipped with an elevator, all *dwelling units* must be *Group 1* except those covered in Section 9.4 below. In *multiple dwellings* that are for rent, hire, lease, or sale but are not equipped with an elevator, only units on the *ground floor* must be *Group 1* units. *Group 1* units must comply with Section 9.5, and, Sections 42, Bathrooms in Group 1 Dwelling Units, 43, Kitchens in Group 1 Dwelling Units and 46, Bedrooms in Group 1 and 2 Dwelling Units.

**9.4 GROUP 2A DWELLING UNITS**

In *multiple dwellings* that are for rent, hire, or lease (but not for sale) and contain twenty (20) or more units, at least five percent (5%) of the *dwelling units* must be *Group 2A* units. *Group 2A* units must comply with Section 9.5, and Sections 44, Bathrooms in Group 2 Dwelling Units, 45, Kitchens in Group 2 Dwelling Units and 46, Bathrooms in Group 1 and 2 Dwelling Units.

9.4.1 Total *dwelling units* in a complex: When *multiple dwellings* consist of more than one *building* on a *site* or are located on several, non-contiguous *sites*,



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**Multiple Dwellings**

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all *dwelling units* shall be added together to determine applicability.

- 9.4.2      **Distribution:** *Group 2A dwelling units* shall be proportionally distributed across the total number of units according to number of bedrooms, size, quality, price and location on each *accessible* floor.
- 9.4.3      **Variance:** The *Board* may consider applications for *variance* from the five percent (5%) requirement if there is a greater or lesser need for *Group 2A* units in certain areas of the Commonwealth. A *variance* may be granted only if there is a sufficient factual basis, using data from the central registry of the Massachusetts Rehabilitation Commission and other sources, to establish with a reasonable degree of certainty the present and future needs for the applicable *Group 2A* units. The *Board* may not require more than ten percent (10%) of the *dwelling units* to be *Group 2A* units. A *variance* for less than five percent (5%) shall not be granted unless the applicant can demonstrate that the units are not needed by physically handicapped persons and cannot be readily rented, hired, or leased to other persons. Applications for variances must be made to the *Board* before the issuance of a building permit.

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**9.5      ENTRANCES**

All *entrances* to units shall be *accessible*.

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**9.6      ELEVATORS**

Elevators are not required in *multiple dwellings* by these regulations. If one or more elevators are installed they shall comply with **Section 28, Elevators**.

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**9.7      DOORBELLS**

Doorbells to individual units in *multiple dwellings* shall be *accessible*.

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**9.8      DWELLING UNIT INTERIORS**

The interior of all *Group 1* and *2 dwelling units* shall comply with the following requirements:

- 9.8.1      **Doorways:** All doorways and all openings that allow passage must provide a *clear* opening of not less than thirty-four inches (34" = 864mm) (+/- 3/4" = 19mm) and must comply with **Sections 26.4, Double Leaf Doorways** through **26.9, Door Closers** and **26.11, Door Hardware**. For door types such as bifold, pocket, and accordion doors, the *clear* opening is measured when the door is in its most fully open position. See **Fig. 26b** and **26c**.
- 9.8.2      **Visitor identification:** Every entry door to each *dwelling unit* shall have a means by which the resident can visually identify a visitor before opening the door. This may be achieved by any of the following:

## Multiple Dwellings

- a. In *Group 1* and *2A* units, a peephole mounted sixty inches (60" = 1524mm) above the floor, a vision panel in the door with its bottom edge no higher than sixty inches (60" = 1524mm) above the floor, or a sidelight with its bottom edge no higher than sixty inches (60" = 1524mm) above the floor, shall be provided.
- b. In *Group 2B* units, an additional peephole mounted at forty-two inches (42" = 1067mm) above the floor; a vision panel in the door with its bottom edge no higher than forty-two inches (42" = 1067mm) above the floor; or a sidelight with its bottom edge no higher than forty-two inches (42" = 1067mm) above the floor. See Fig. 9a.

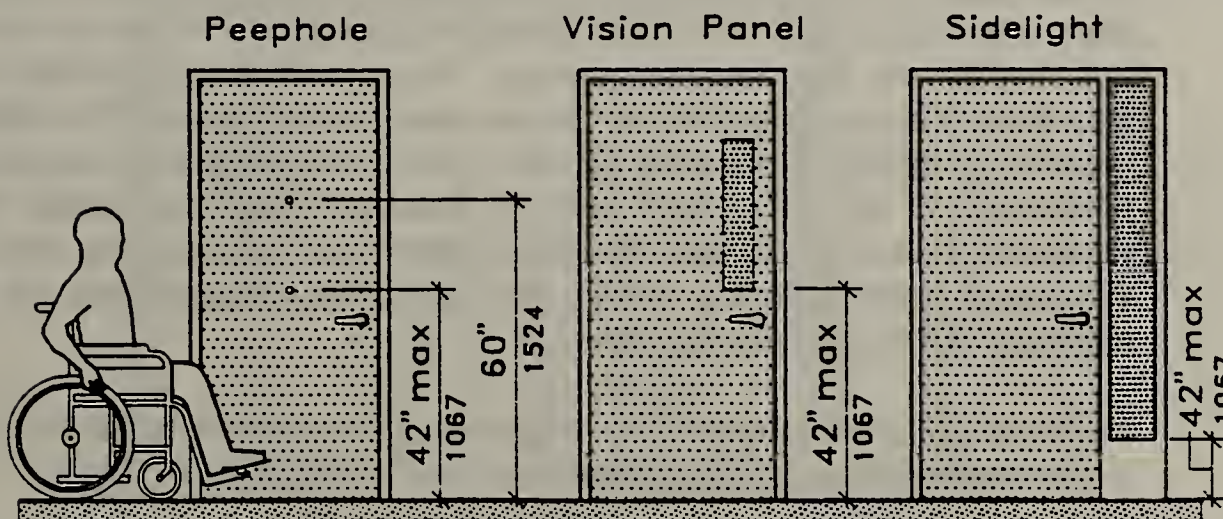


Figure 9a

- 9.8.3 *Accessible routes:* An *accessible route* at least thirty-six inches (36" = 914mm) wide shall be provided to all rooms and spaces in the *dwelling unit* including exterior decks, patios, balconies, attached garages, storage closets, and mechanical closets.
- a. Exterior deck, patio, or balcony surfaces shall be no more than one-half inch (1/2" = 13mm) below the floor level of the interior of the *dwelling unit* unless they are constructed of impervious material such as concrete, brick or flagstone. In such cases, the surface should be no more than four inches (4" = 102mm) below the floor level of the interior *dwelling unit*.
  - In *Group 2B Units*, the exterior deck, patio, or balcony surfaces shall be either permanently installed at no more than one-half inch (1/2" = 13mm) below the floor level of the interior of the *dwelling unit* or a temporary raised surface, such as duckboards, that is no more than one-half inch (1/2" = 13mm) below the interior floor level shall be available upon



**Multiple Dwellings**

*request.*

- 9.8.4 Laundry Facilities: If a washer or dryer is provided in a *Group 1* or *Group 2A* unit, it shall be front loading or capable of being replaced with a front loading appliance. If a washer or dryer is provided in a *Group 2B dwelling unit*, it shall be front loading. If residents are expected to operate shut-off valves for the washer, the shut-off valves shall be located within the *zone of reach*. For common area laundry facilities, see **Section 10.8, Laundry Facilities**.
- 9.8.5 Alarms: Where a fire alarm is provided, it shall comply with **Section 40, Alarms**.
- 9.8.6 Outlets: Electrical outlets, telephone outlets, cable TV jacks, and other wall outlets shall be located no lower than fifteen inches (15" = 381mm) and no higher than forty-eight inches (48" = 1219mm), measured at the centerline of the lowest receptacle. All outlets shall be located at least twenty-four inches (24" = 610mm) from interior corners. When outlets are located on walls above counters or other fixtures that are twenty-two inches (22" = 559mm) or greater in depth, they shall be no higher than forty-four inches (44" = 1118mm). In *Group 1* and *2* units, at least one electrical outlet must be installed on the same wall as the telephone outlet and the door chime. Wherever exterior decks, patios, and balconies are provided, an exterior electrical outlet shall also be provided.
- In Group 2B units, all telephone outlets must have an electrical outlet located within twelve inches (12" = 305mm) for installation of TDD.*
- 9.8.7 Controls and alarms: In *Group 2A* and *2B* units, the operable portions of all controls and alarms, including but not limited to: intercoms, and heat and air controls, shall be located between thirty-six and forty-eight inches (36" to 48" = 914mm to 1219mm) above the floor, measured at the centerline of the operable portion in its highest position. Operable portions shall be located at least twenty-four inches (24" = 610mm) from interior corners. Controls and alarms in *Group 1* units may be located at other locations so long as sufficient wiring is provided to permit future relocation from thirty-six inches to forty-eight inches (36" to 48" = 914mm to 1219mm).



## Multiple Dwellings

## 9.8.8 Closets: Shall comply with the following:

- a. Closet shelves/poles: Closet walls shall be structurally capable of supporting the installation of shelves and poles which are relocatable from forty-two inches to seventy-two inches (42" to 72" = 1067mm to 1829mm) to the top of shelf or pole, whichever is higher.
- b. Closet depth: Where the interior depth of the closet exceeds twenty-four inches (24" = 610mm), the doorway must comply with **Section 26.5, Width** so that a disabled person can enter the closet. The bottom track of the closet door must also be recessed or no more than one quarter of an inch high (1/4" = 6mm). When the interior depth of the closet is twenty-four inches (24" = 610mm) or less, it shall be open to the room to permit a disabled person to reach all parts of the closet. See Fig. 9b.

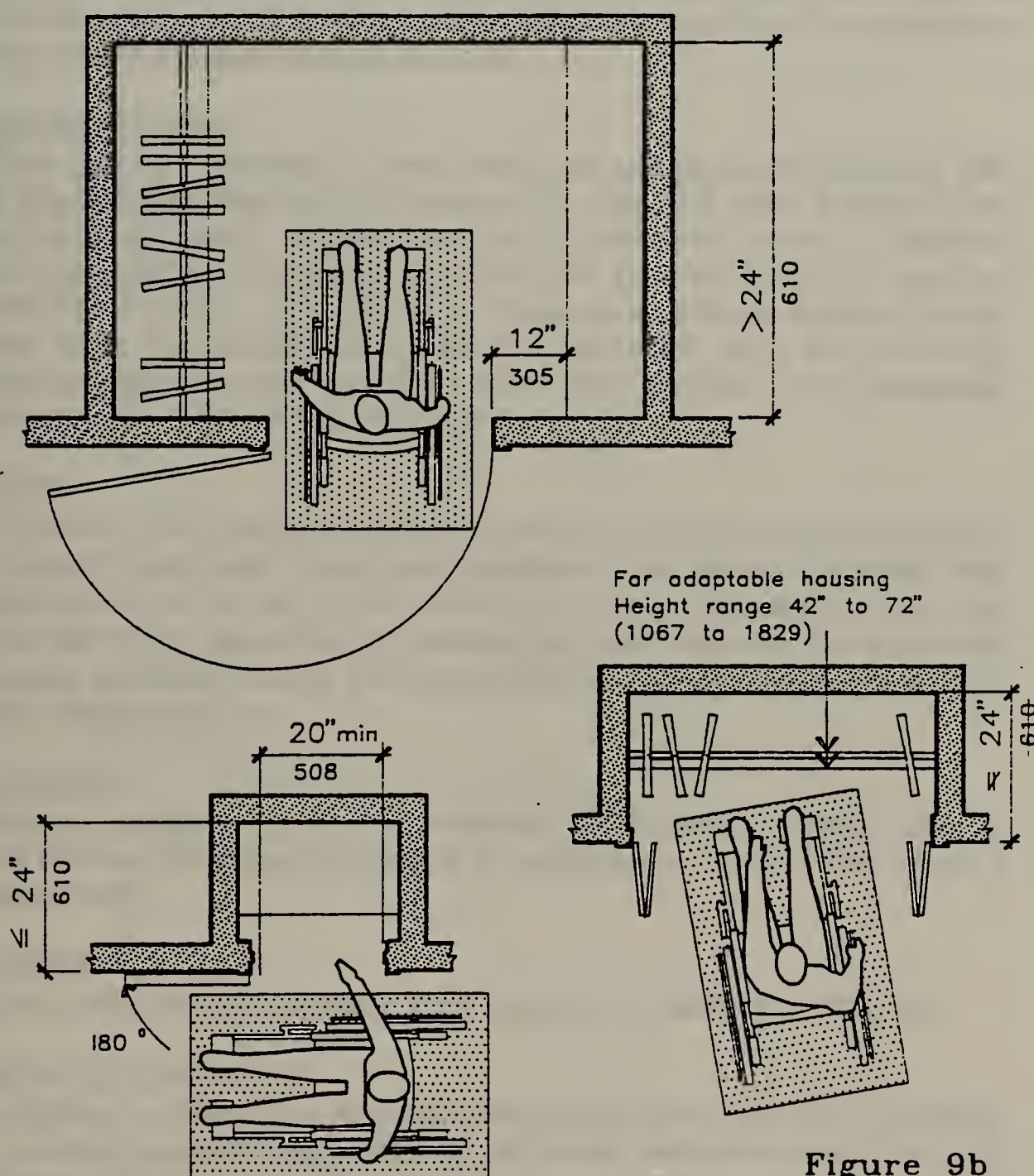


Figure 9b

**Multiple Dwellings**

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9.9

**TOWNHOUSES**

*(Reserved - Townhouses are not exempt for the purposes of Section 9.4.)*

**Public Use and Common Use Spaces in Multiple Dwellings****10.1 GENERAL**

The *public use* and *common use* spaces of *multiple dwellings* shall be *accessible* and shall comply with these Regulations. *Public* and *common use* spaces are those spaces inside or outside a *building* that are used by residents and/or visitors. *Public use* and *common use* spaces shall include but not be limited to community facilities, meeting rooms, restaurants, recreation *space*, health facilities, pools, public toilet rooms, laundry areas, trash areas, storage areas, mailboxes, *walks*, *sidewalks*, parking lots and garages, *entrances*, elevators, lobbies and foyers, as well as corridors and stairways leading to *dwelling units*.

**10.2 ACCESSIBLE ROUTES**

There shall be an *accessible route* at least thirty-six inches (36" = 914mm) wide connecting *accessible* parking, *accessible entrances*, public and *common use* spaces, and *dwelling units*. Wherever possible, the *accessible route* shall be the shortest possible route.

**10.3 PARKING SPACES**

Where parking is provided, it shall comply or be capable of complying with the provisions of **Section 23.2, Number through 23.8, Valet Parking**. The number of *accessible* spaces shall not be limited in number by **Section 23.4, Parking Spaces** but shall be provided in sufficient number to meet the needs of the *dwelling unit* occupants. If parking spaces are assigned to individual units, those spaces designated for *accessible* units shall have *signage* indicating the unit number to which each belongs. An international symbol of accessibility shall not be used.

**10.4 DOORS**

All doorways and openings located in *common use* and *public use* spaces and along *accessible* routes shall provide a *clear* opening of not less than thirty-four inches (34" +/- 3/4" = 864mm +/- 19mm) measured from the face of the door to the face of the stop on the latch side when the door is open 90 degrees and shall comply with **Section 26.2, Revolving Doors** through **26.11, Door Hardware**.

**10.5 STORAGE**

If remote storage is available to residents, equivalent *accessible* storage shall be capable of being provided to residents of *Group 1* and *Group 2 dwelling units*.

**10.6 ALARMS**

Where a fire alarm is provided, it shall comply with **Section 40, Alarms**.

**10.7 HEIGHT OF CONTROLS**

The highest position of the *operable parts* of any control, dispenser, receptacle, or other operable equipment shall be located within the *zone of reach* as defined in **Section 5, Definitions**.



**Public Use and Common Use Spaces in Multiple Dwellings**

**10.8 LAUNDRY FACILITIES**

If laundry facilities are provided in *Multiple dwellings*, they shall comply with Fig. 10a.

- 10.8.1 Location: Laundry facilities shall be on an *accessible level* and on an *accessible route*.
- 10.8.2 At least one washing machine and at least one clothes dryer shall be front loading, shall have a side hinged door, and shall be located so that the door can be opened 180 degrees.
- 10.8.3 Where laundry work *space*, such as a folding table, is provided, it shall be *accessible*.
- 10.8.4 Controls shall fall within the *zone of reach* as defined in Section 5, Definitions.

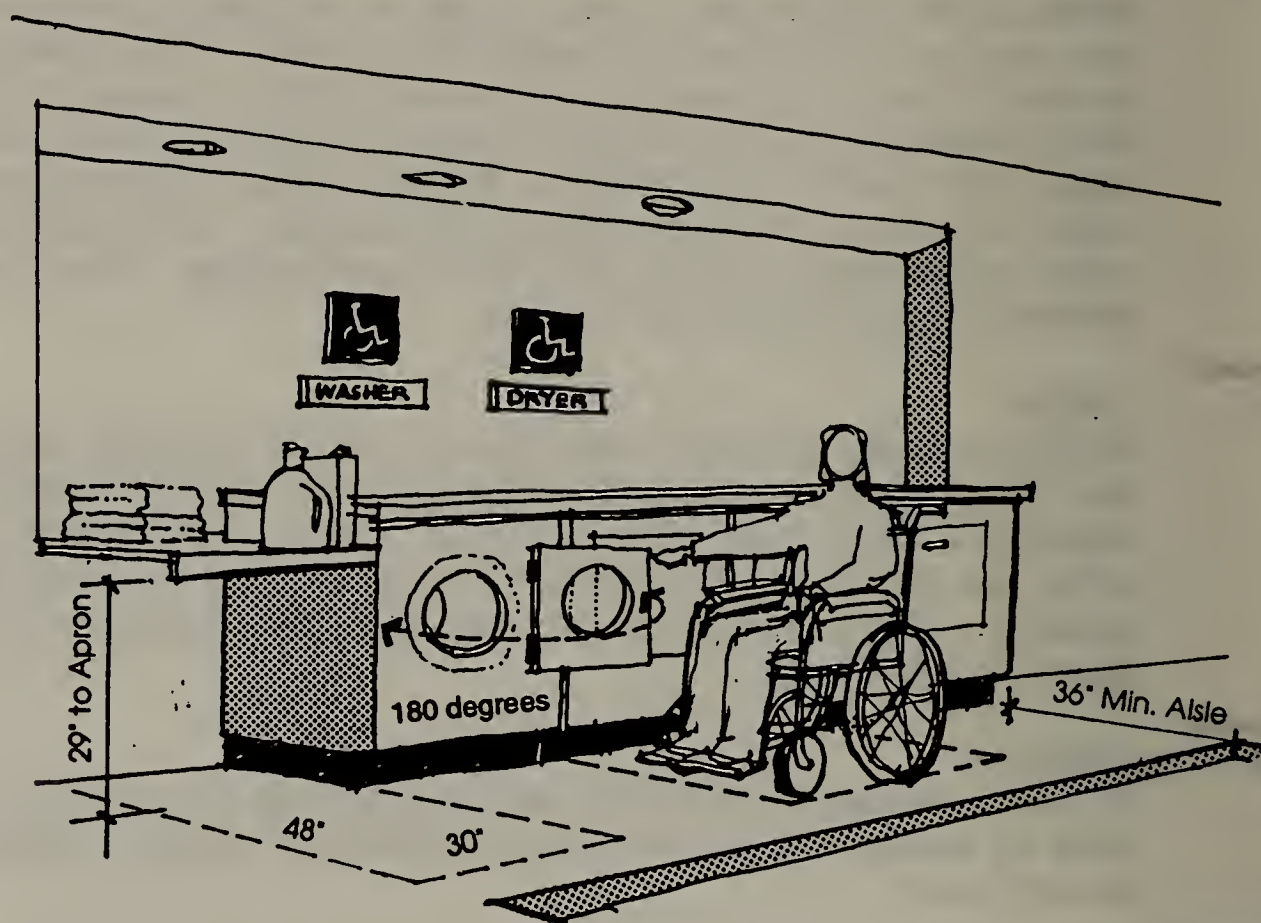


Figure 10a

**10.9 KITCHEN FACILITIES**

Sinks, counters, and cooking facilities provided in *common use spaces* shall comply with Section 32, Kitchens.

**Commercial Buildings****11.1 GENERAL**

The design of commercial *buildings* shall comply with these Regulations, except as specified or modified in this Section. Commercial *buildings* are *public buildings* as defined in these Regulations and shall include but not be limited to:

- 11.1.1 *Buildings* where a service or product is offered to the public and into which a member of the public may enter including but not limited to: doctors', dentists', lawyers', and accountants' offices, insurance companies, counseling services, veterinarians, realtors, travel agents.

**11.2 COMMERCIAL FACILITIES LOCATED IN PRIVATE RESIDENCES**

When a commercial *facility* is located in a private residence, the portion of the residence used exclusively in the operation of the commercial *facility* or that portion used both for the commercial *facility* and for residential purposes shall comply with these Regulations.

**11.3 COMMERCIAL CONDOMINIUMS**

Those spaces in commercial condominiums where the service or product is offered to the public, and those premises which a member of the public may enter shall comply with these Regulations.

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## Educational Facilities

### 12.1 GENERAL

Educational facilities shall comply with these Regulations, except as specified or modified in this Section. Educational facilities shall include but not be limited to: public and private schools, nurseries, pre-schools, day care facilities, colleges and universities, libraries, galleries, museums, and training facilities.

12.1.1 Applicability: Administrative spaces, instructional spaces, areas open to students or the general public shall comply.

12.1.2 Dormitories shall comply with the requirements of **Section 8, Transient Lodging Facilities**.

12.1.3 Amphitheaters and lecture halls of educational institutions shall comply with **Section 14, Places of Assembly**.

### 12.2 LIBRARIES

Shall comply with the following and **Figure 12a**:

12.2.1 General: The design of all public areas of a library, including reading and study areas, stacks, reference rooms, reserve areas, and special facilities or collections, shall comply with this Section.

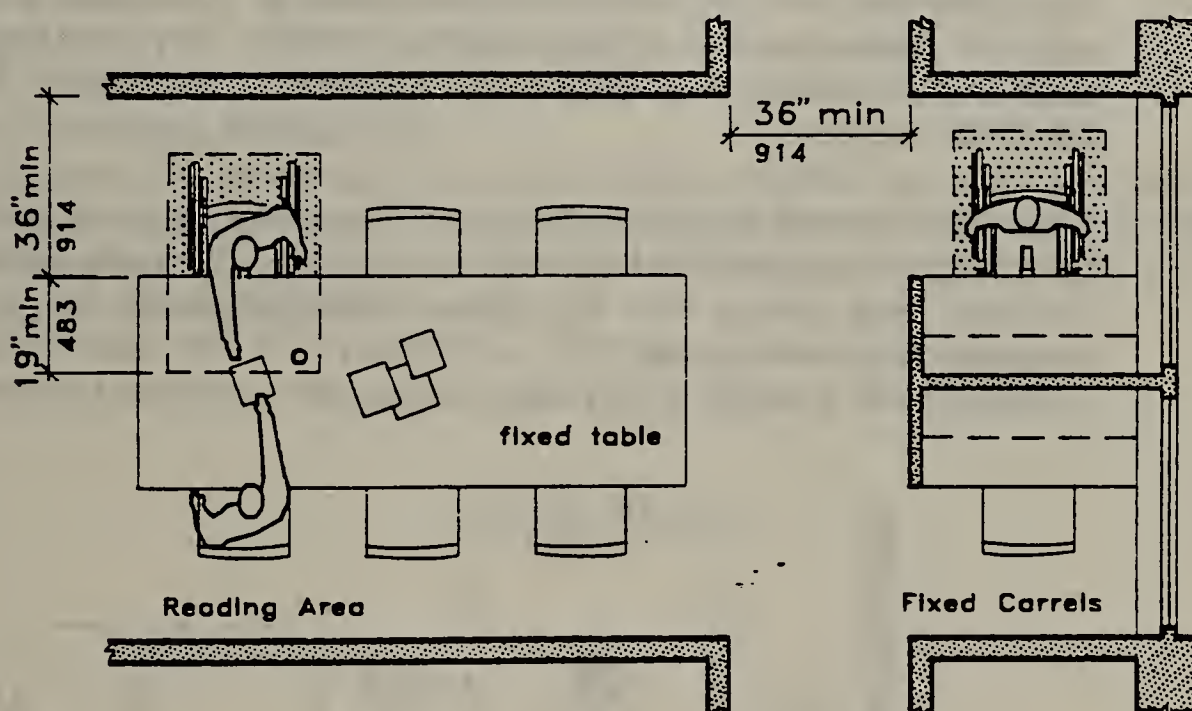


Figure 12a

12.2.2 Reading and Study Areas: Where fixed seating, tables, or study carrels are provided, at least 5 percent (5%) with a minimum of one of each *element* shall be *accessible*, be on an *accessible route*, and comply with the follow-

## Educational Facilities

- a. Clearances between fixed *accessible* tables and between study carrels shall be at least thirty-six inches (36" = 914mm).
- b. *Clear floor space* as defined in Section 5, Definitions shall be provided at each seating space. Such *clear floor space* shall not overlap knee space by more than nineteen inches (19" = 483 mm). See Fig. 12a.
- c. Knee Clearances: If seating for people in wheelchairs is provided at tables or counters, knee spaces at least twenty-seven inches (685mm) high, thirty inches (30" = 762mm) wide, and nineteen inches (19" = 483mm) deep shall be provided. See Fig. 12a.
- d. Height of Tables or Counters: The tops of *accessible* tables and counters shall be from twenty-eight inches to thirty-four inches (28" to 34" = 711mm to 864mm) above the finish floor or ground.

12.2.3 Check-Out Areas: At least one lane at each check-out area shall have a counter a minimum of thirty-six inches (36" = 914mm) in length and a maximum of thirty-six inches (36" = 914mm) in height. See Fig. 7a.

12.2.4 Security Devices: Any traffic control or book security gates or turnstiles shall not prevent access or egress to people in wheelchairs. Security gates shall have thirty-four inch (34" = 864mm) *clear* opening. If turnstiles are used, an adjacent *accessible* door or gate shall be provided. Any *level* changes created by such devices shall comply with Section 20, Accessible Route and 29, Floor Surfaces.

12.2.5 Card Catalogs and Magazine Displays: *Clear* aisle space at card catalogs and magazine displays shall be a minimum of thirty-six inches (36" = 914mm) and comply with Fig. 12b. Maximum reach height shall be between eighteen inches (18" = 457mm) and fifty-four inches (54" = 1372mm), with a height of forty-eight inches (48" = 1219mm) preferred.

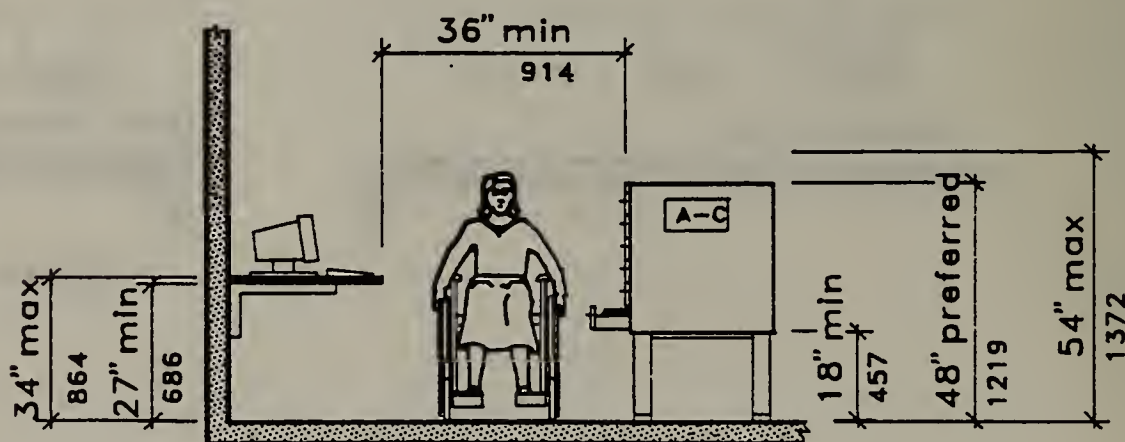


Figure 12b  
Catalogs (Card and Computer)



## Educational Facilities

- 12.2.6 Stacks: Aisles between stacks shall have a minimum *clear* width of thirty-six inches (36" = 914mm) and preferably forty-two inches (42" = 1067mm), where possible, as shown in Fig. 12c. Shelf height in stack areas is unrestricted.

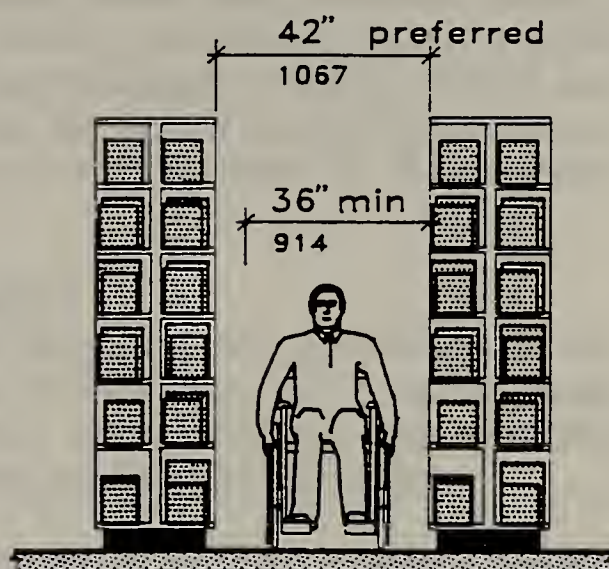


Figure 12c  
Stacks

## 12.3

## AUDIOVISUAL FACILITIES

Captioned film, captioned videotapes, video cassettes recorders and television decoders shall be provided. Where A.V. facilities are provided, provide in quantities complying with Table 8.3.5, *Sleeping accommodations for Persons with Hearing Impairments*.



Educational Facilities

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**Medical Care Facilities****13.1 GENERAL**

Medical care facilities shall comply with these Regulations, except as specified or modified in this Section. Medical care facilities are *buildings* in which people receive physical, medical or psychiatric treatment or care on an inpatient or outpatient basis. They shall include but not be limited to hospitals, clinics, sanitariums, alcohol and drug detoxification centers, nursing homes, and *buildings* in which one or more doctors provide health services similar to those provided by any of the above. Doctors' and dentists' offices, counseling offices, offices of chiropractors, psychologists, and psychiatrists and places providing health services that do not require overnight accommodation shall comply with the requirements of **Section 11, Commercial Buildings**.

**13.2 PUBLIC USE AND COMMON USE AREAS**

*Public and common use* areas shall be *accessible* and shall include but are not limited to areas where services are provided to the public, waiting areas, changing rooms, diagnostic and treatment areas, offices and meeting rooms, food services, gift shops, and emergency facilities, and toilet rooms.

13.2.1 Transaction counters across which transactions are conducted with patients and the public shall comply with the following:

- a. Location: The counter shall be on an *accessible route*.
- b. Length: A portion of the counter or an auxiliary counter shall be at least thirty-six inches (36" = 914mm) in length.
- c. Height: That portion of the counter shall not exceed thirty-six inches (36" = 914mm) above the finish floor.
- d. *Clear Floor Area*: Shall be provided in front of counter.

**13.3 PATIENT BEDROOMS AND TOILETS**

Shall comply with one or more of the following, as applicable:

13.3.1 In general purpose hospitals, psychiatric facilities, and detoxification facilities, at least 10 percent (10%) of patient bedrooms and toilets shall be *accessible* and dispersed throughout specialties (i.e. cardiology, eye and ear, urology, etc.)

13.3.2 In hospitals and *rehabilitation* facilities, or units therein, that specialize in treating conditions that affect mobility, all patient bedrooms and toilets shall be *accessible*.

13.3.3 In long term care facilities and nursing homes, at least 50 percent (50%) of patient bedrooms and toilets shall be *accessible*.

13.3.4 In all facilities, deaf or hard of hearing patients shall be provided with a decoder and a TDD on a loan basis.

## Medical Care Facilities

### 13.4 ENTRANCES

At least one *accessible entrance* that complies with Section 25, Entrances, shall be protected from the weather by canopy or roof overhang. Such *entrances* shall incorporate a passenger loading zone that complies with Section 20, Accessible Route.

### 13.5 DOORWAYS

All bedrooms and *bathrooms* shall comply with the requirements of Section 26, Doors and Doorways.

Exception: Entry doors to acute care hospital bedrooms for inpatients shall be exempted from the requirement in Section 26.6, Maneuvering Clearance if the door opening is at least forty-four inches (44" = 1118mm) wide.

### 13.6 PATIENT BEDROOMS

Each bedroom shall have adequate wheelchair turning space complying with Section 6.3, Wheelchair Turning Space. In rooms with 2 beds, it is preferable that this space be located between beds. Each bedroom shall have adequate *space* to provide a minimum *clear floor space* of thirty-six inches (36" = 914mm) along each side of the bed and to provide an *accessible route* to each side of each bed. See Fig. 13a.

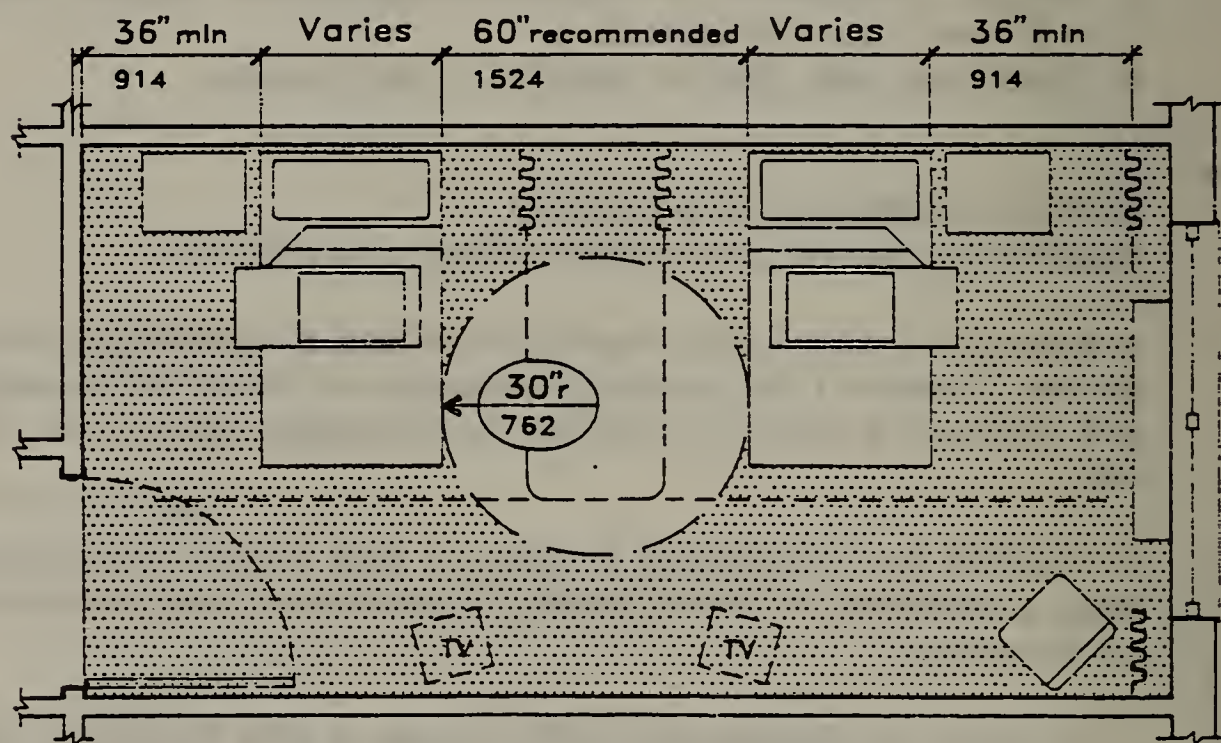


Figure 13a



**Medical Care Facilities****13.7 PATIENT TOILET ROOMS**

Where toilet/*bathrooms* are provided as a part of a patient bedroom, each *accessible* patient bedroom shall have an *accessible* toilet/*bathroom* that complies with *Group 2B Bathrooms* in **Section 44, Bathrooms in Group 2 Dwelling Units**. *Accessible bathrooms* shall be on an *accessible route*.

**13.8 TUB AND SHOWER ROOMS**

Where shower rooms or tub rooms are provided, at least one of each per floor must be *accessible*.

**13.9 CHANGING ROOMS**

Shall comply with the requirements of **Section 33, Changing Rooms**.

**13.10 AUXILIARY VISUAL ALARMS**

Patient bedrooms shall be equipped with one of the following:

- a. A visual alarm connected to the *building* emergency alarm system; or
- b. A standard 110-volt electrical receptacle into which such an alarm can be connected and a means by which a signal from the *building* emergency alarm system can trigger such an auxiliary alarm.

**13.11 TELEPHONES**

Telephones permanently installed in patient rooms shall have volume controls complying with **Section 37, Telephones**. An *accessible* electrical outlet within forty-eight inches (48" = 1219mm) of a telephone connection shall be provided to facilitate the use of an *assistive listening system*, which shall be provided by the *facility* upon request.

**13.12 TELEVISIONS**

Where televisions are provided in patient bedrooms, the *facility* shall provide, upon request, a television amplifier and a caption decoder.

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## Places of Assembly

### 14.1 GENERAL

Places of assembly shall comply with all parts of these Regulations, except as specified or modified in this Section. Places of assembly shall include but not be limited to theaters, auditoriums, armories, lecture halls, arenas and stadiums. Associated, support, or related areas, including but not limited to lobbies, ticket offices, seating, stages, backstage areas, dressing rooms, showers and green rooms, shall also be *accessible*.

### 14.2 NUMBER OF ACCESSIBLE SEATS

Wheelchair spaces: In places of assembly with fixed seating, the minimum number of *accessible* spaces shall be computed in accordance with the following table:

<u>Total Seating</u>	<u>Wheelchair Spaces</u>
4 to 25	1
26 to 50	2
51 to 300	4
301 to 500	6
over 500	6, plus 1 additional space for each total seating capacity increase of 100.

14.2.1 Armless seats: In addition, one percent of all fixed seats, but not less than one seat, shall be aisle seats with no armrests on the aisle side, or shall have removable or folding armrests on the aisle side. Each such seat shall be identified by a sign or marker. *Signage* notifying patrons of the availability of such seats shall be posted at the ticket office. Aisle seats are not required to be on a *level* surface. See Fig. 14a.

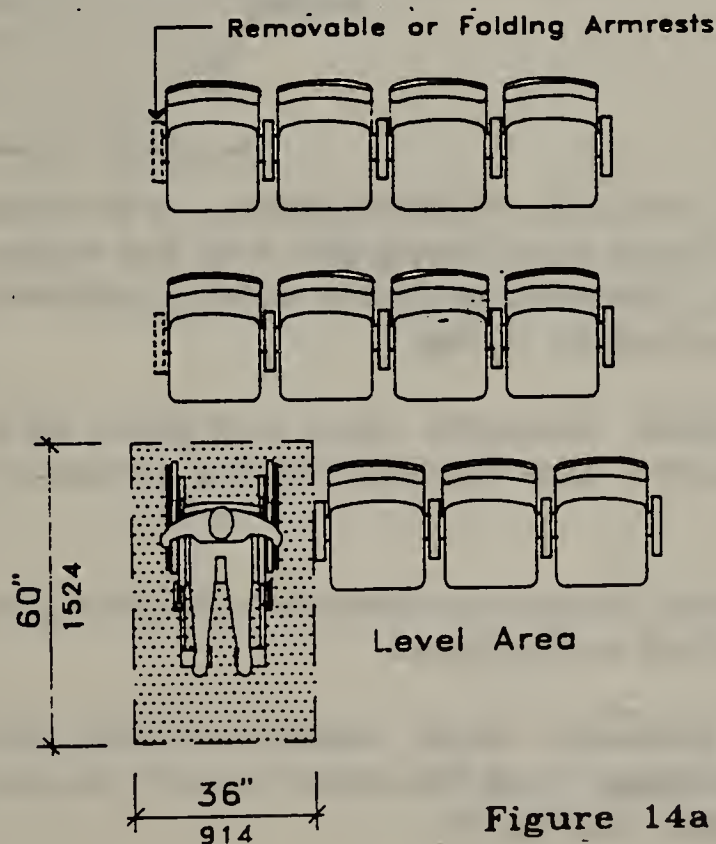


Figure 14a



## Places of Assembly

### 14.3 ACCESSIBLE SPACE

Each wheelchair *space* shall be sixty inches (60" = 1524mm) long and thirty-six inches (36" = 914mm) wide, shall be *level*, and shall comply with Section 29, Floor Surfaces.

### 14.4 PLACEMENT OF WHEELCHAIR SPACES

Wheelchair spaces shall be an integral part of any fixed seating plan.

- 14.4.1 Distribution: *Accessible* seats shall be proportionally distributed to provide a choice of admission prices and lines of sight comparable to those for members of the general public. See Fig. 14b.

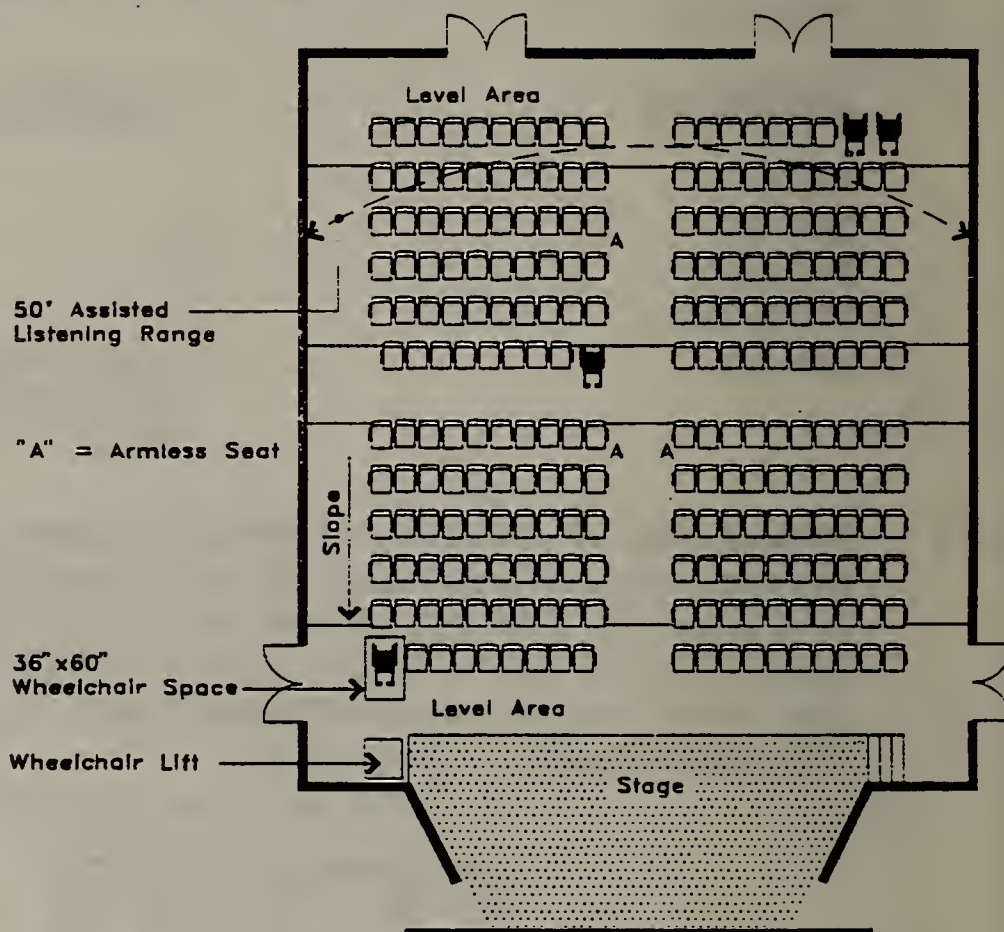


Figure 14b

EXCEPTION: *Accessible* viewing positions may be clustered for bleachers, balconies, and other areas having sight lines that require slopes of greater than 5 percent. Equivalent *accessible* viewing positions may be located on levels having *accessible egress*.

- 14.4.2 *Accessible Route*: *Accessible* seats shall adjoin, but in no way interfere with, an *accessible route* that also serves as a *means of egress* in case of emergency.
- 14.4.3 Companion seats: At least one companion fixed seat shall be provided next to each wheelchair seating space.
- 14.4.4 Placement of *Accessible* Seats: Readily removable seats may be installed in wheelchair spaces when the spaces are not required to accommodate wheelchair users. See Fig 14a.

**Places of Assembly****14.5 ASSISTIVE LISTENING DEVICES**

In spaces such as concert and lecture halls, playhouses, movie theaters, and meeting rooms, *assembly areas* shall comply with the following:

14.5.1 An *assembly area* shall have a permanently installed assistive listening system if:

- a. the *assembly area* accommodates at least 50 persons, or
- b. if it has an audio-amplification system, and
- c. it has fixed seating.

14.5.2 For other *assembly areas*, a permanently installed assistive listening system, or an adequate number of electrical outlets or other supplementary wiring necessary to support a portable assistive listening system shall be provided. The minimum number of receivers to be provided shall be equal to 4 percent (4%) of the total number of seats, but not less than two receivers.

14.5.3 Placement of Listening Systems: If the listening system serves individual fixed seats, then such seats shall be located within a fifty foot (50' = 15m) viewing distance of the stage or playing area and shall have a complete view of the stage or playing area.

14.5.4 *Signage* shall be installed to notify patrons of the availability of a listening system and shall comply with **Section 41, Signage**.



## Places of Assembly

### 14.6 ACCESS TO PERFORMING AREAS

An *accessible route* shall connect wheelchair seating locations with performing areas, including stages, arena floors, dressing rooms, locker rooms, and other spaces used by performers. See Fig. 14c.

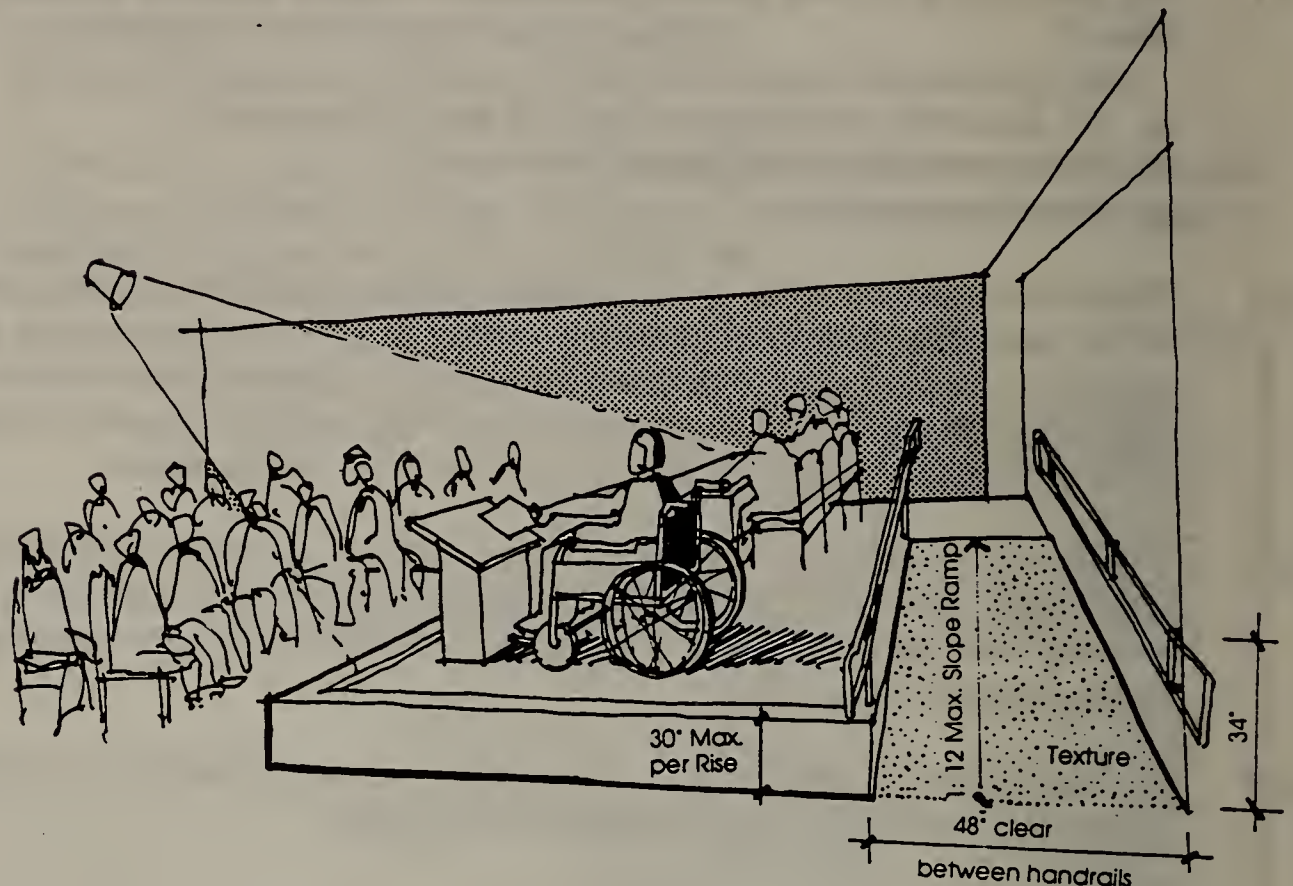


Figure 14c

### 14.7 BOX OFFICE TICKET COUNTERS

Shall comply with the following:

- Location: The counter shall be on an *accessible route*.
- Length: A portion of the counter or an auxiliary counter shall be at least thirty-six inches (36" = 914mm) in length.
- Height: The counter shall not exceed thirty-six inches (36" = 914mm) above the finish floor.
- Clear Floor Area*: Provide *clear floor area* as defined in Section 5, Definitions.

- 14.7.1 Space Allowance and Reach Ranges: See Section 6.5, Forward Reach and 6.6, Side Reach.

### 14.8 DRESSING ROOMS

Where provided, shall comply with Section 33, Changing Rooms.

### 14.9 SLOPE IN AUDITORIUMS/ASSEMBLY AREAS: (Reserved)



**Detention Facilities****15.1 GENERAL**

Detention facilities shall comply with these Regulations, except as specified or modified in this Section. Detention facilities shall include, but not be limited to, police stations and *buildings* designated for the detention, incarceration, and/or treatment of juveniles and/or adults committed by court or voluntary process.

**15.2 PUBLIC AREAS**

In such facilities, public areas, including but not limited to areas for visitation and consultation, shall be *accessible* and shall be on an *accessible route* from the *entrance* of the *facility*.

**15.3 INMATE AREAS**

Program, dining, work, and recreational facilities and all areas open to inmates, detainees, or visitors shall be *accessible* and on an *accessible route*. Five percent (5%) of the detention cells or other types of living and sleeping spaces shall be *accessible*.

**Detention Facilities**

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## Houses of Worship

### 16.1 GENERAL

Houses of worship shall comply with these Regulations, except as specified or modified in this Section. Houses of worship include but are not limited to churches, chapels, synagogues, administrative offices, and religious meeting halls.

Exception: Day care centers located in houses of worship are educational facilities and shall comply with **Section 12, Educational Facilities**.

### 16.2 NUMBER OF ACCESSIBLE SEATS

Shall comply with the following:

16.2.1 Wheelchair spaces: In houses of worship with fixed seating, the minimum number of *accessible* spaces shall be computed in accordance with the following table.

<u>Total Seating</u>	<u>Wheelchair Spaces</u>
4 to 25	1
26 to 50	2
51 to 300	4
301 to 500	6
over 500	6, plus 1 additional <i>space</i> for each seating capacity increase of 100
total	

16.2.2 Armless seats: In addition, one percent of all fixed seats, but not less than one seat, shall be aisle seats with no armrests on the aisle side, or shall have removable or folding armrests on the aisle side. Aisle seats are not required to be on a *level* surface. See Fig. 16a.

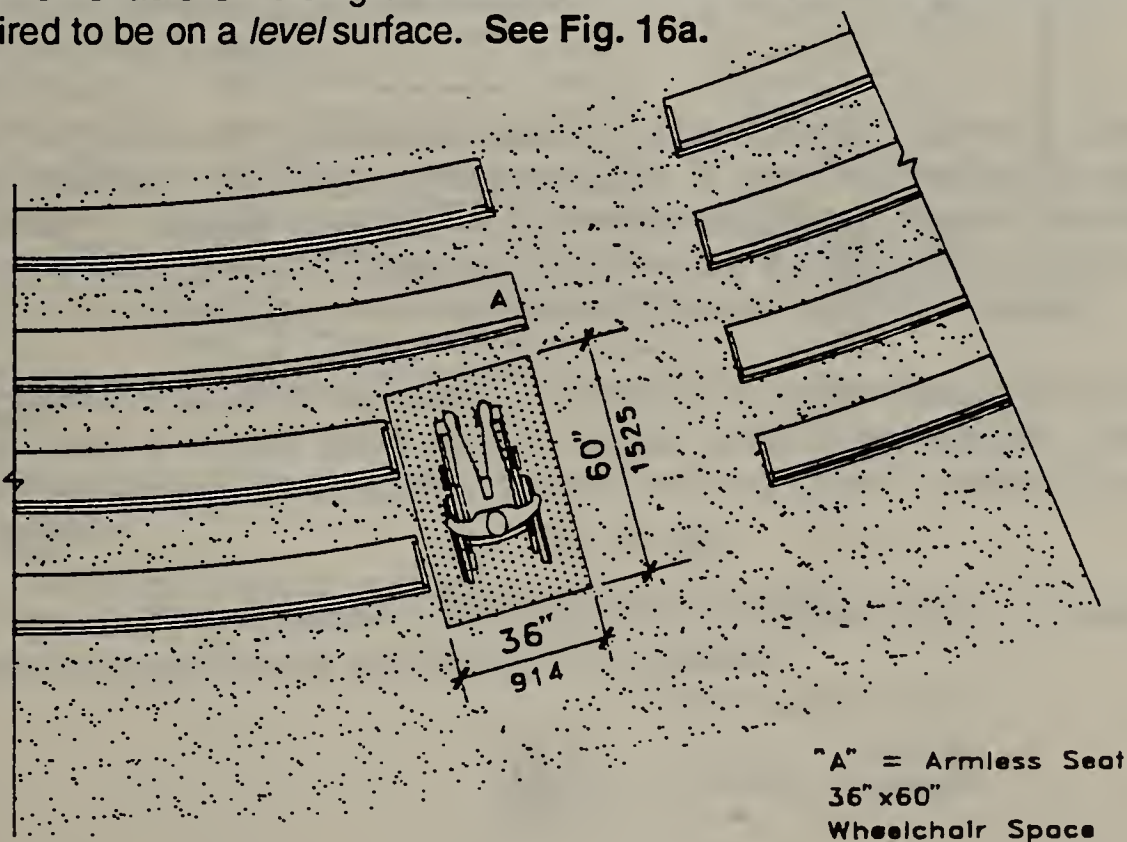


Figure 16a



Houses of Worship

16.3 ACCESSIBLE SPACE

Each wheelchair space shall be sixty inches (60" = 1524mm) long and thirty-six inches (36" = 914mm) wide, shall be *level*, and shall comply with Section 29, Floors. See Fig. 16b.

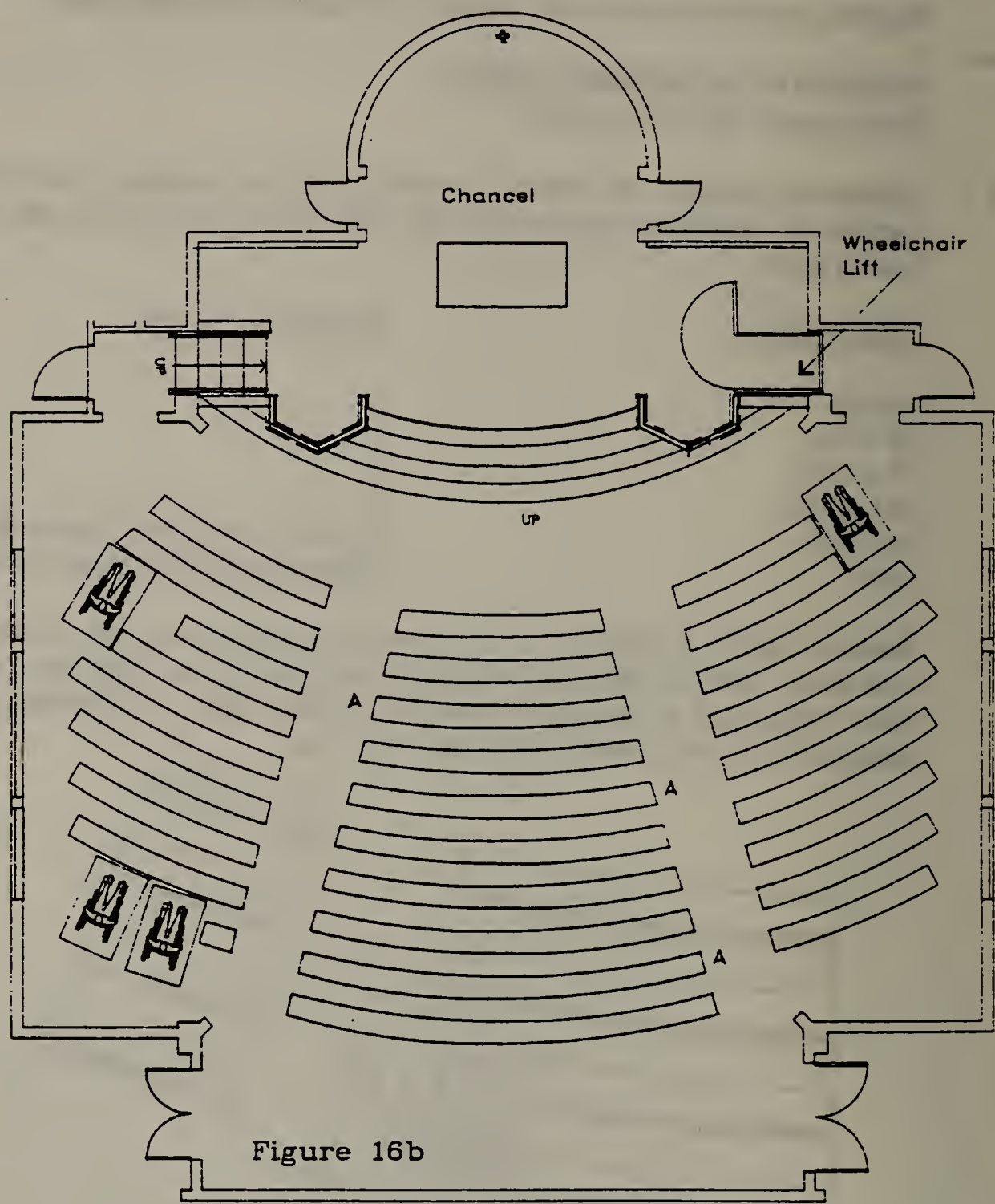


Figure 16b

"A" = Armless Seat

36"x60"  
Wheelchair Space →

**Houses of Worship****16.4 PLACEMENT OF WHEELCHAIR SPACES**

Wheelchair spaces shall be an integral part of any fixed seating plan.

6.4.1 **Distribution:** Wheelchair spaces shall be proportionally distributed to provide people with physical disabilities a choice of lines of sight comparable to those for members of the general public.

16.4.2 **Accessible Route:** Wheelchair spaces shall adjoin, but in no way interfere with, an *accessible route* that also serves as a *means of egress* in case of emergency.

16.4.3 **Companion seats:** At least one companion fixed seat shall be provided next to each wheelchair seating area.

16.4.4 **Removable seats/pews:** Readily removable seats /pews may be installed in wheelchair spaces when the spaces are not required to accommodate wheelchair users.

**16.5 ASSISTIVE LISTENING DEVICES**

Where audible communications are integral to the *use* of the *space*, they shall comply with the following:

16.5.1 An *assembly area* shall have a permanently installed assistive listening system if:

- a. the *assembly area* accommodates at least 50 persons or if it has an audio-amplification system, and
- b. it has fixed seating.

16.5.2 For other *assembly areas*, a permanently installed assistive listening system, or an adequate number of electrical outlets or other supplementary wiring necessary to support a portable assistive listening system, shall be provided. The minimum number of receivers to be provided shall be equal to 4 percent (4%) of the total number of seats, but in no case less than two receivers.

16.5.3 **Placement of Listening Systems:** If the listening system serves individual fixed seats, then such seats shall be located within a fifty foot (50' = 15m) viewing distance of the speaker's podium and shall have a complete view of the podium.

16.5.4 **Signage** shall be installed to notify patrons of the availability of a listening system and shall comply with **Section 41, Signage**.

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## Restaurants

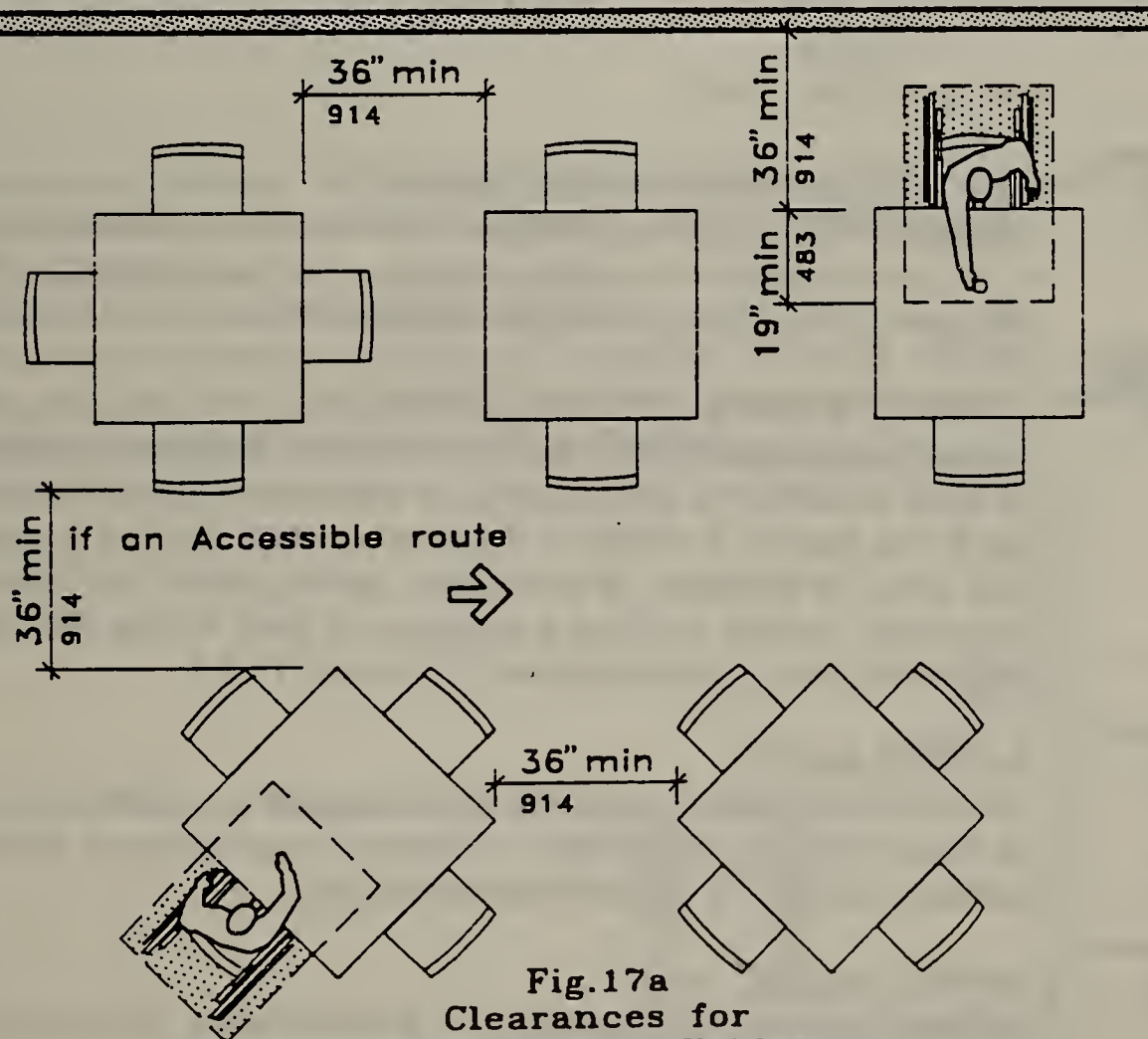
## 17.1 GENERAL

Restaurants shall comply with these Regulations, except as specified or modified in this Section. Restaurants shall include, but not be limited to, cafeterias, lounges, bars, and other places open to the public where food or beverages are served.

## 17.2 SEATING

Where fixed tables or built in seating are provided, at least 5 percent, but not less than one, of the fixed tables shall be *accessible*, be on an *accessible route*, and in compliance with the following:

- 17.2.1 Distribution: *Accessible* fixed tables shall be distributed by size and location throughout the *space* or *facility*. In establishments where separate areas are designated for smoking and non-smoking patrons, the required number of *accessible* fixed tables shall be proportionally distributed between the smoking and non-smoking areas.
- 17.2.2 Clearances between fixed *accessible* tables shall be at least thirty-six inches (36" = 914mm).
- 17.2.3 *Clear floor space* as defined in Section 5 shall be provided at each seating *space*. Such *clear floor space* shall not overlap knee *space* by more than nineteen (19" = 483mm). See Fig. 17a.



## Restaurants

- 17.2.4 **Knee Clearances:** If seating for people in wheelchairs is provided at tables or counters, knee spaces at least twenty-seven inches (27" = 686mm) high, thirty inches (30" = 762mm) wide, and nineteen inches (19" = 483mm) deep shall be provided. See Fig. 17b.
- 17.2.5 **Height of Tables or Counters:** The tops of *accessible* tables and counters shall be from twenty-eight inches to thirty-four inches (28" to 34" = 711mm to 864mm) above the finish floor or ground. See Fig 17b.

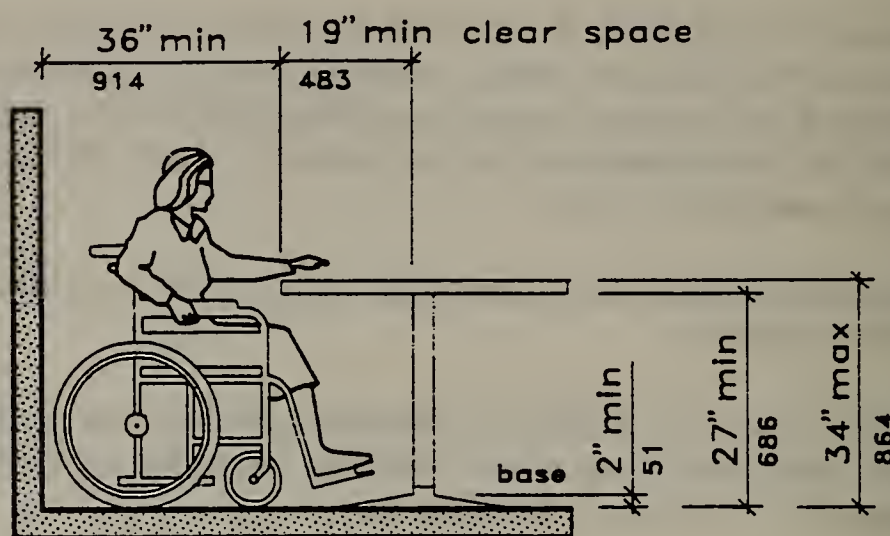


Fig. 17b

### 17.3

#### DINING COUNTERS WITHOUT SERVICE

At counters where food is consumed but there is no service, a sixty inch (60" = 1524mm) portion of the dining counter shall be *accessible*, on an *accessible route*, and in compliance with Section 17.2.5

### 17.4

#### COUNTERS AND BARS WITH SERVICE

At counters exceeding thirty four inches (34" = 864mm) in height, where food or drink is served for consumption by customers seated on stools or standing at the counter, a portion of the main counter shall be *accessible* or service shall be available at *accessible* tables within the same area. The *accessible* portion shall be a minimum of sixty inches (60" = 1524mm) in length and comply with Sections 17.2.4 and 17.2.5.

### 17.5

#### ACCESS AISLES

All *accessible* fixed tables shall be *accessible* by means of an *access aisle* at least thirty-six inches (36" = 914mm) *clear* between parallel edges of tables or between a wall and the table edges.

### 17.6

#### DINING AREAS

All dining areas, including raised or sunken dining areas, *mezzanines*, loggias, and outdoor seating areas, shall be *accessible*.



## Restaurants

**17.7 FOOD SERVICE LINES**

Food service lines, including but not limited to: cafeterias, buffet tables and salad bars, shall comply with the following:

**17.7.1** *Clear Width:* Food selection aisles, including *entrance* and *exit*, shall have a minimum *clear* width of thirty-six inches (36" = 914mm), with a preferred *clear* width of forty-two inches (42" = 1067mm) to allow passage by other customers around a person using a wheelchair. See Fig. 17c.

**17.7.2** Tray slides shall be mounted no higher than thirty-four inches (34" = 864mm) above the floor. See Fig. 17c.

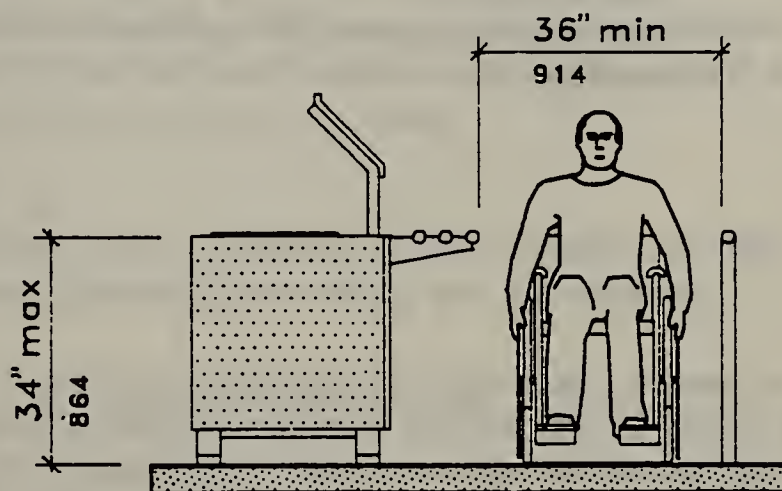


Fig.17c  
Food Service Line

**17.7.3** If self-service shelves are provided, at least 50 percent (50%) of each type must be within the *zone of reach* defined in Section 5, Definitions.

**17.8 TABLEWARE AND CONDIMENT AREAS**

Self-service shelves and dispensing devices for tableware, dishware, condiments, food and beverages shall be installed to comply with *zone of reach* as defined in Section 5, Definitions. See Fig. 17d.

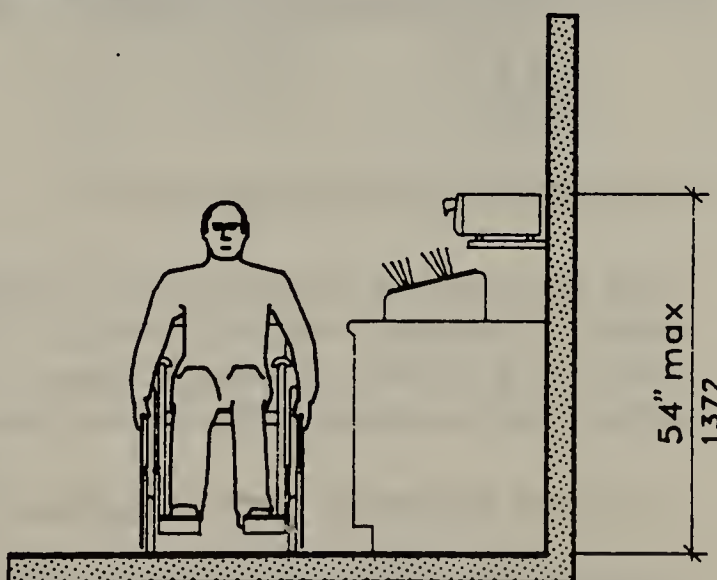


Figure 17d



**Restaurants****17.9 RAISED PLATFORMS**

In banquet rooms or spaces where a head table or speaker's lectern is located on a raised platform, the platform shall be *accessible* in compliance with **Section 24, Ramps**, or **Section 28, Elevators and Lifts**. Open edges of a raised platform shall be protected by a curb or by placement of tables.

**17.10 VENDING MACHINES AND OTHER EQUIPMENT**

Spaces for vending machines and other equipment shall be located on an *accessible route* and shall comply with *zone of reach* as defined in **Section 5, Definitions**.

**17.11 CASH REGISTER**

Where payment is made at a cash register, the counter shall be no higher than thirty-six inches (36" = 914mm) from the floor to the top of the counter. See Fig. 17e.

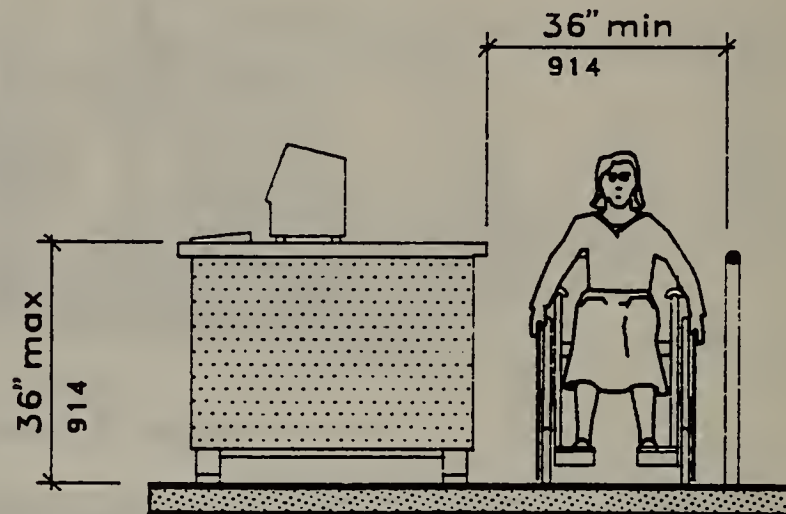


Figure 17e

## Transportation Terminals

### 18.1 GENERAL

Transportation terminals shall comply with these Regulations, except as specified or modified in this Section. Transportation terminals shall include but not be limited to airports, bus and train stations, subway stops, commuter rail and rapid transit stations.

### 18.2 ACCESSIBLE ROUTE

At all newly constructed, reconstructed, altered or remodeled stations, an *accessible route* shall connect all terminal *buildings* or station houses, platforms, parking areas and street *entrances*.

### 18.3 ENTRANCES

Overhead protection and/or snow melting provisions shall be incorporated in the immediate exterior area of the terminal *entrances* and shall extend at least five feet (5' = 524mm) from the face of the building.

### 18.4 PLATFORM ACCESS

To facilitate access to subway cars, airplanes, buses, trains, and other means of public transportation, platforms shall comply with the following:

18.4.1 Platform to Vehicle Gaps: At newly constructed, reconstructed, altered, or remodeled stations, the distance between platform and vehicle at boarding platforms shall not exceed four inches (4" = 102mm) in the horizontal plane and two inches (2" = 51mm) in the vertical plane. Where *construction* constraints result in platform to vehicle gaps that exceed these requirements, a bridge plate designed to eliminate such gaps shall be made available at every door of the vehicle where passengers are boarding or disembarking.

18.4.2 Platform Warnings: Platform edges at newly constructed, reconstructed, altered, or remodeled stations shall have a yellow band of *detectable warning* at least thirty-six inches (36" = 914mm) in width. See Fig 18a.

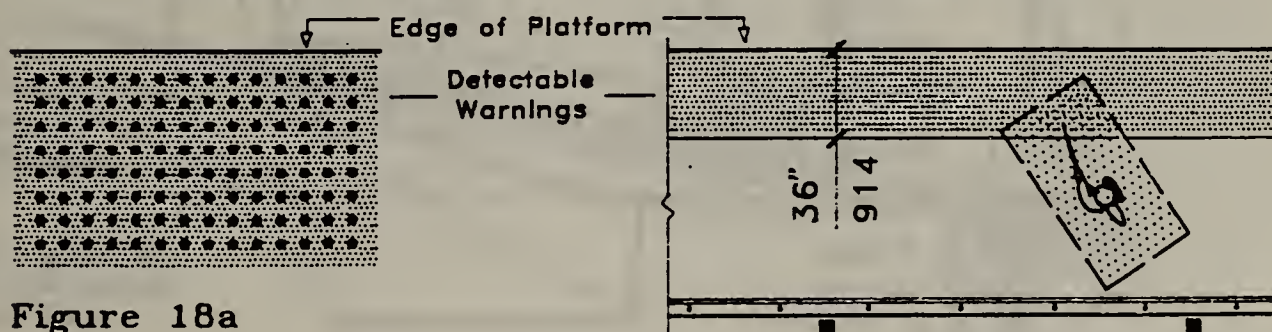


Figure 18a

- Detectable warnings* shall consist of raised truncated domes with a diameter of nominal 0.9 inches (0.9" = 23mm), a height of nominal 0.2 inches (0.2" = 5mm) and a center-to-center spacing of nominal 2.35 inches (2.35" = 60mm) and shall contrast visually with adjoining surfaces, either light-on-dark, or dark-on-light.
- The material used to provide contrast shall be an integral part of the walking surface.
- Detectable warnings* used on interior surfaces shall differ from adjoining walking surfaces in resiliency or sound-on-cane contact.



## Transportation Terminals

### 18.5 COMMUTER RAIL VEHICLES

To facilitate access to commuter rail vehicles, the following shall be provided:

18.5.1 Platforms at new stations: At newly constructed stations serving commuter rail coaches, access shall be provided to all passengers and to all coaches of the train by means of a full length raised platform. For purposes of this section, a newly constructed station is defined as any station stop where passenger services has not heretofore been provided or where no regularly scheduled passenger service has been provided for five (5) or more years. See Fig. 18b.

- Such platforms shall be at least sixty inches (60" = 1524mm) in *clear* width.
- Such platforms shall provide overhead shelter from rain and snow along a total of at least one hundred and fifty feet (150' = 46m) of their length and at all access *ramps*.

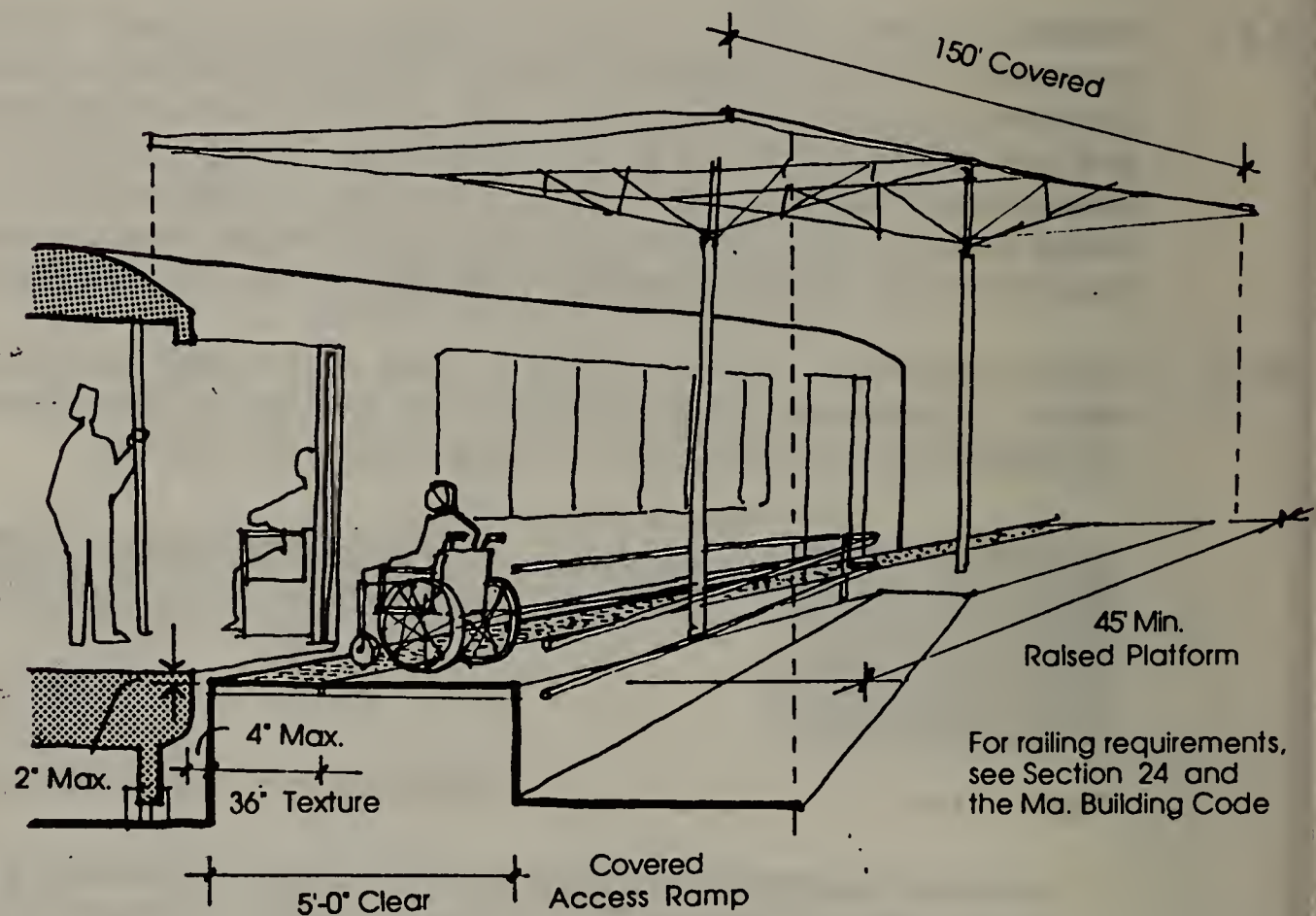


Figure 18b



**Transportation Terminals**

18.5.2 Platforms at reconstructed stations: Any reconstructed, altered or remodeled stations serving commuter rail coaches shall afford access to at least two coaches of a train by means of a raised platform. For the purposes of this section, "reconstructed" shall have the definition of "*reconstruction*" in 521 C.M.R., Section 5.17, "altered" shall have the definition of "alteration" in 521 C.M.R., Section 5.4 and "remodeled" shall have the definition of "*remodeling*" in 521 C.M.R., Section 5.18.

- a. Such platforms shall be at least five feet (5' = 1424mm) in *clear* width
- b. Such platforms shall be at least forty-five feet (45' = 14m) in length and shall, along their full length and at all access *ramps*, provide overhead shelter from rain and snow.

18.6 **FARE TRANSACTION**

At least one fare transaction area shall be *accessible* and shall be a minimum of thirty-six inches (36" = 914mm) wide.

18.7 **ENTRY/EXIT GATE**

At least one entry and one exit gate shall be *accessible* and shall be a minimum of thirty-six inches (36" = 914mm) wide.

18.8 **HAZARDOUS VEHICULAR AREAS**

*Detectable warnings* shall be provided where a *walk* crosses or adjoins a *vehicular way* and the pedestrian and vehicular areas are not separated by curbs, railings, or other *elements*. The boundary between the areas shall be defined by a continuous *detectable warning* which is thirty-six inches (36" = 914mm) wide, complying with Section 18.4.2 (a), (b), and (c).

18.9 **SEATING**

Within the terminal there shall be seating at intervals not to exceed two hundred feet (200' = 61m).

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## Recreational Facilities

## 19.1

## GENERAL

Recreational facilities shall comply with these Regulations, except as specified or modified in this Section. Recreational facilities shall include but not be limited to courts, rinks, swimming pools, gymnasiums, stadiums, health and sports clubs, radio control facilities, whirlpools, jacuzzis, gyms, weightlifting areas, playgrounds, zoos, fairgrounds, beaches, piers, bandstands, gazebos, parks, bowling alleys, picnic areas, video arcades and campsites. All areas open to and used by the public, including but not limited to locker rooms, shower facilities, saunas, steam rooms, suntanning rooms, weight rooms, aerobics and dance rooms, tennis, racquet and squash courts and spectator areas in recreation facilities shall be *accessible*.

## 19.2

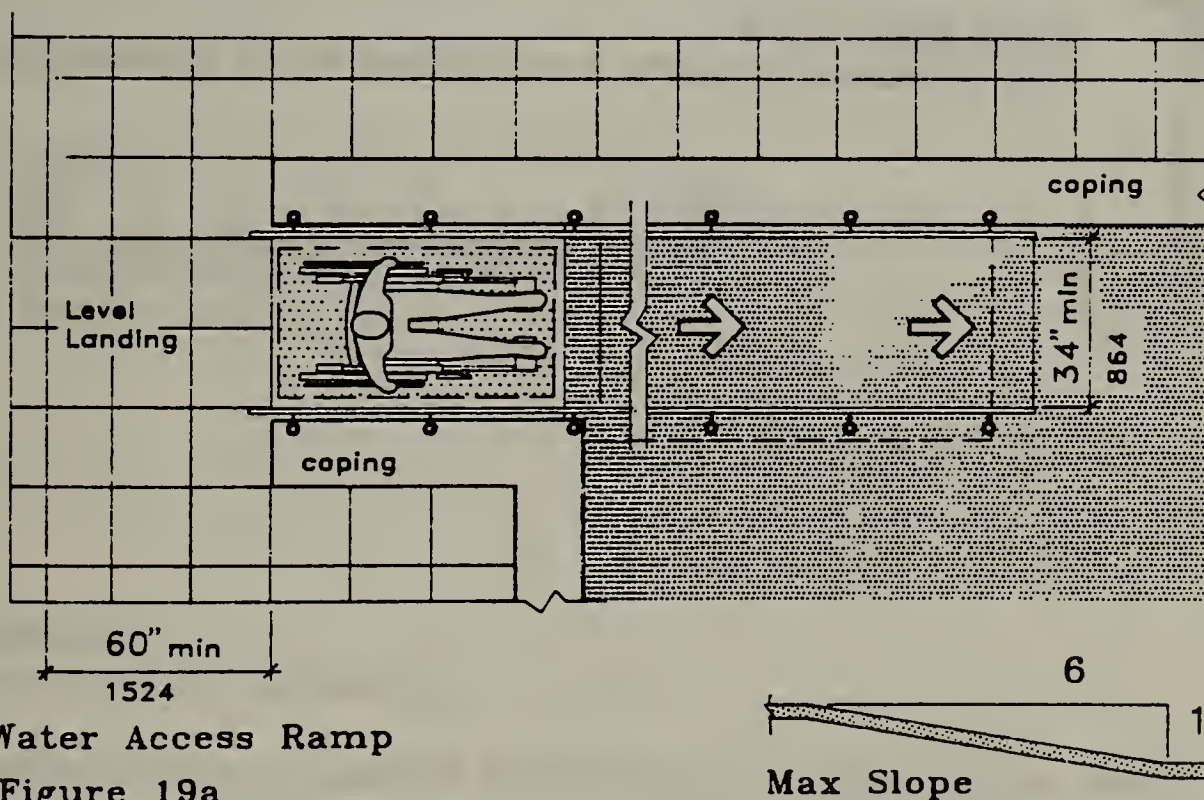
## WATER FACILITIES

Swimming pools, lap pools, wading pools, diving pools used for scuba or general swimming, and whirlpools and jacuzzis in all locations subject to these Regulations shall be *accessible*.

## 19.2.1

Access Devices: Accessibility to water facilities shall be by means of any of the following:

- a. A thirty-four inch (34" = 864mm) wide *ramp* with a *slip resistant* surface extending into the shallow end of the pool. Such *ramps* shall have a slope not exceeding one-to-six (1:6), and shall have handrails on both sides. See Fig. 19a.

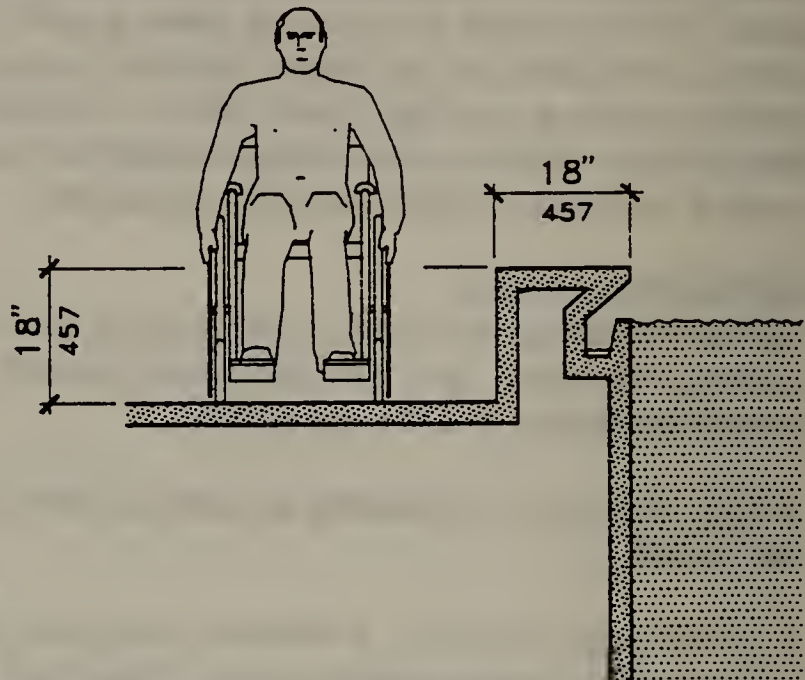


Water Access Ramp  
Figure 19a



## Recreational Facilities

- b. A lifting device.
- c. When the water level of the pool is above the level of the *path of travel*, a raised coping may be utilized as a transfer area, if it is eighteen inches (18" = 457mm) above the *path of travel* and is a minimum of eighteen inches wide (18" = 457mm). See Fig. 19b.



Raised Coping

Figure 19b

- 19.2.2 *Path of travel.* There shall be an *accessible route* not less than forty-eight inches (48" = 1219mm) wide around such pools. These paths shall have a surface that is *slip resistant*.

**19.3 BOWLING ALLEYS**

Shall provide an *accessible route* to at least two (2) adjacent lanes.

## Recreational Facilities

## 19.4 LOCKER ROOMS

Shall have a thirty-six inch (36" = 914mm) wide *accessible route*.

19.4.1 Lockers: At least five percent (5%) of the lockers shall be *accessible* and shall have locking/opening devices that are operable with a closed fist and mounted no higher than forty-two inches (42" = 1067mm) from the floor.

19.4.2 Seating: If benches are provided, there shall be a thirty-six inch (36" = 914mm) wide aisle between benches and lockers and a five foot turning diameter near the *accessible* lockers. See Fig. 19c.

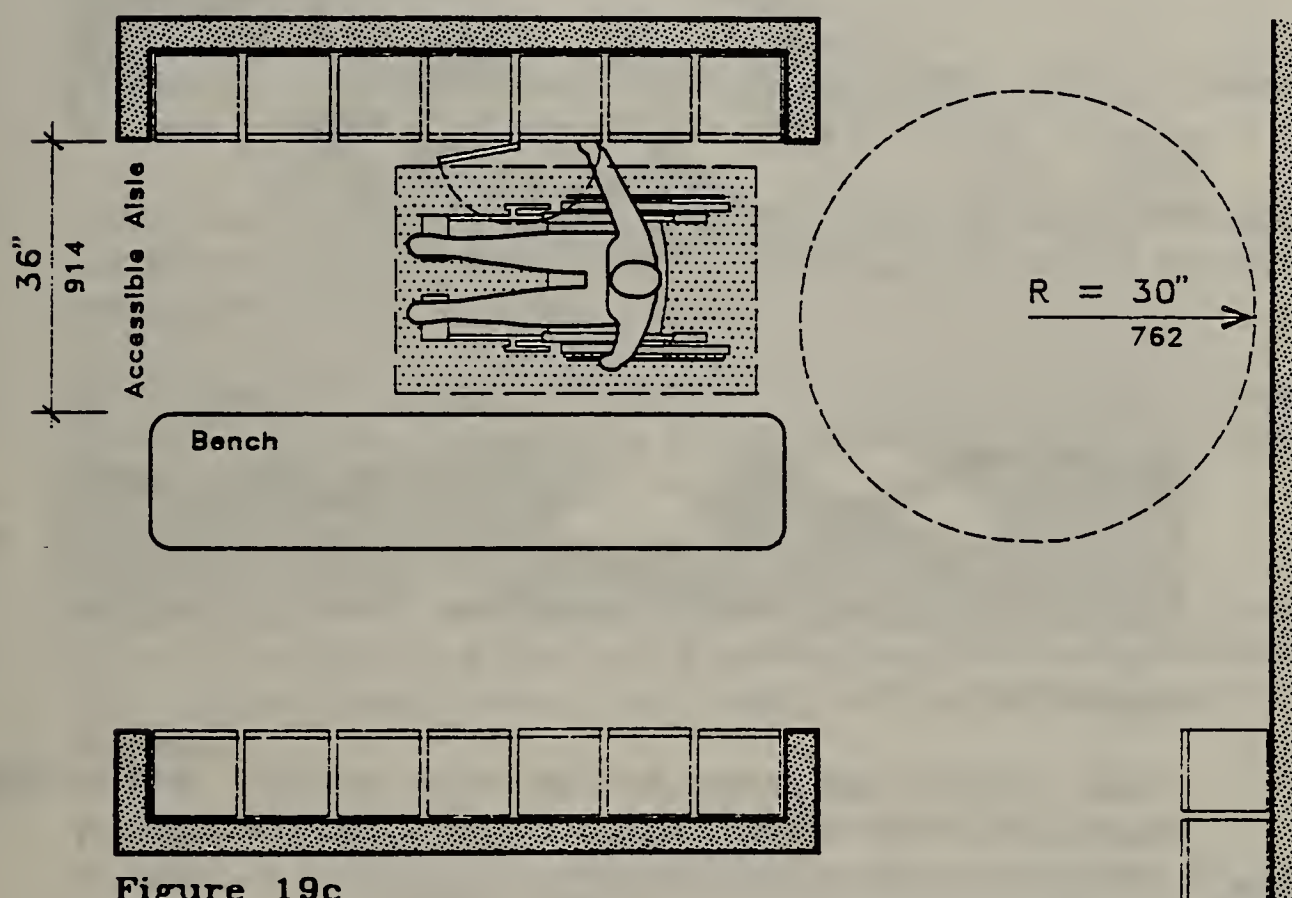


Figure 19c

## 19.5 CAMPSITES

Shall comply with the following:

19.5.1 Campsite Access: At least five percent (5%) of campsites shall be *accessible* and dispersed among those campsites that could be reached from an *accessible route*. Areas leading into such *sites* should be paved or hard packed.



## Recreational Facilities

- 19.5.2 Tables: At least five percent (5%) of tables shall be *accessible*. Tables for the *accessible sites* shall provide *clear space* under the table top not less than thirty inches wide (30" = 762mm) and nineteen inches (19" = 483mm) deep per seating space and not less than twenty-seven inches (27" = 686mm) *clear* from the ground to the underside of the table. See Fig. 19e.



Figure 19d

- 19.5.3 Public restrooms and shower facilities, where provided, shall comply with Section 30, Public Toilet Rooms and 31, Bathing Rooms.

## 19.6 PICNIC AREAS AND HIGHWAY REST AREAS

Shall comply with the following:

- 19.6.1 Access: All facilities shall be *accessible* and shall be on an *accessible route* that is paved or hard packed. If *curb cuts* are provided, they shall comply with Section 21, Curb Cuts.
- 19.6.2 Tables: At least five percent (5%) of tables, where provided shall be *accessible* and shall comply with Section 19.5.2.
- 19.6.3 Public restrooms, where provided, shall comply with Section 30 Public Toilet Rooms and 31, Bathing Rooms.

## 19.7 PLAYGROUNDS (Reserved)



## Accessible Route

### 20.1 GENERAL

An *accessible route* shall provide a continuous unobstructed path connecting *accessible spaces* and *elements* inside and outside a *facility*. *Accessible routes* may include but are not limited to *walks*, halls, corridors, aisles, skywalks, and tunnels. *Accessible routes* may not include stairs, steps, or escalators, even if the stairs and steps are required to be *accessible* under the Regulations.

### 20.2 LOCATION

Within the boundary of the *site*, an *accessible route(s)* shall be provided from public transportation stops, *accessible parking*, *accessible passenger loading zones*, and public streets or *sidewalks* to the *accessible building entrance* they serve. The *accessible route(s)* shall coincide with the *route* for the general public.

20.2.1 At least one *accessible route* shall connect *accessible buildings*, facilities, *elements* and spaces that are on the same *site*.

20.2.2 At least one *accessible route* shall connect *accessible building* or *facility entrances* with all *accessible spaces* and *elements* and with all *accessible dwelling units* within the *building* or *facility*.

20.2.3 An *accessible route* shall connect at least one *accessible entrance* of each *accessible dwelling unit* with those exterior and interior spaces and facilities that serve the *accessible dwelling unit*.

### 20.3 WIDTH

An *accessible route* shall have a minimum *clear width* of thirty-six inches (36" = 914 mm) except at doors and at openings less than twenty-four inches (24" = 610mm) deep where it shall comply with **Section 26, Doors and Doorways**.

### 20.4 TURNS

If a person in a wheelchair must make a turn around an obstruction, the minimum *clear width* of the *accessible route* shall comply with **Fig. 20a** and **20b**.

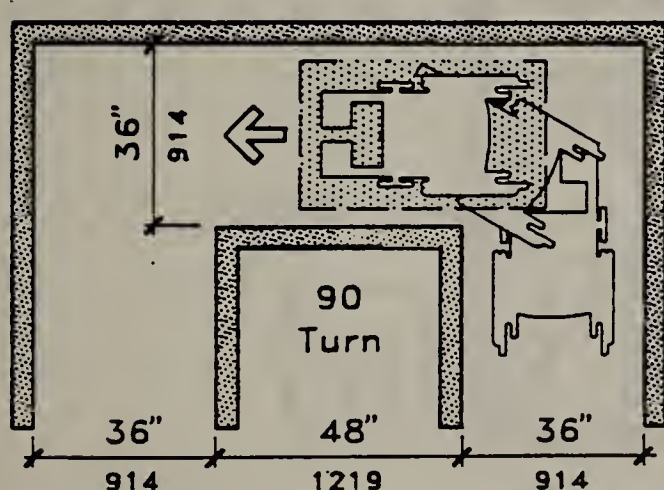


Figure 20a

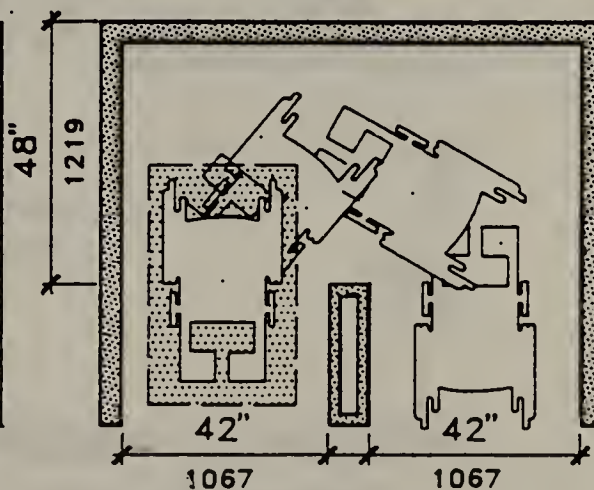


Figure 20b

## Accessible Route

### 20.5 PASSING SPACE

If an *accessible route* has less than sixty inches (60" = 1524mm) *clear* width, then passing spaces at least sixty inches by sixty inches (60" x 60" = 1524mm by 1524mm) shall be located at intervals not to exceed two hundred feet (200' = 61m). A T-intersection of two corridors or *walks* is an acceptable passing place.

### 20.6 PROTRUDING OBJECTS

Shall not reduce the *clear* width of an *accessible route* or maneuvering space (see Fig. 20c) and must be detectable by persons with sight impairments.

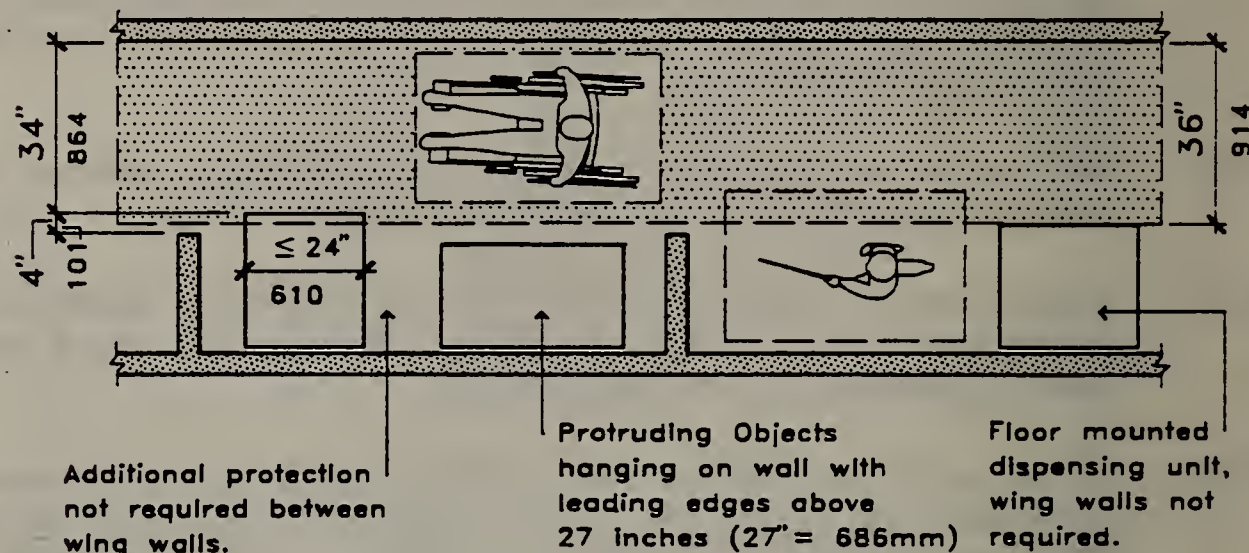
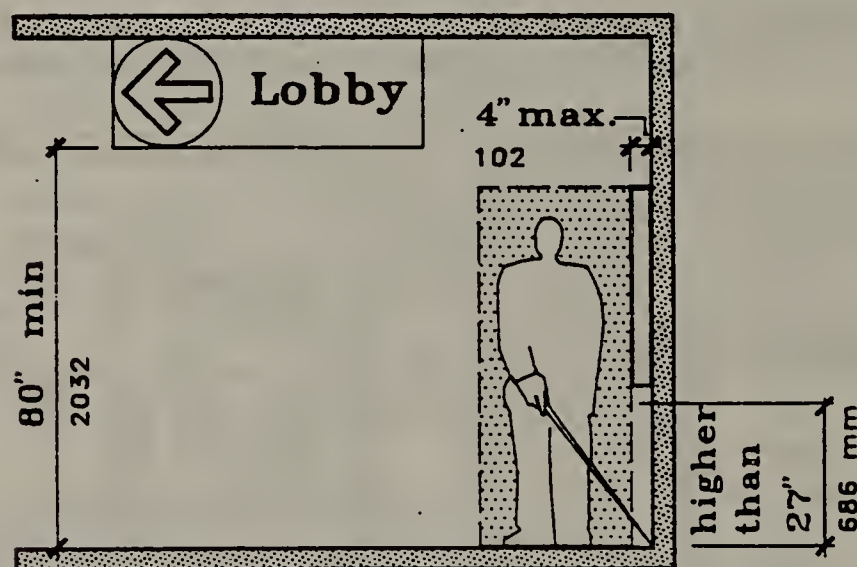


Figure 20c

- 20.6.1 Objects projecting from walls (for example, telephones) with their leading edges between twenty-seven inches and eighty inches (27" and 80" = 686mm and 2032mm) above the finished floor shall protrude no more than four inches (4" = 102mm) into *walks*, halls, corridors, passageways, or aisles. See Fig. 20d.



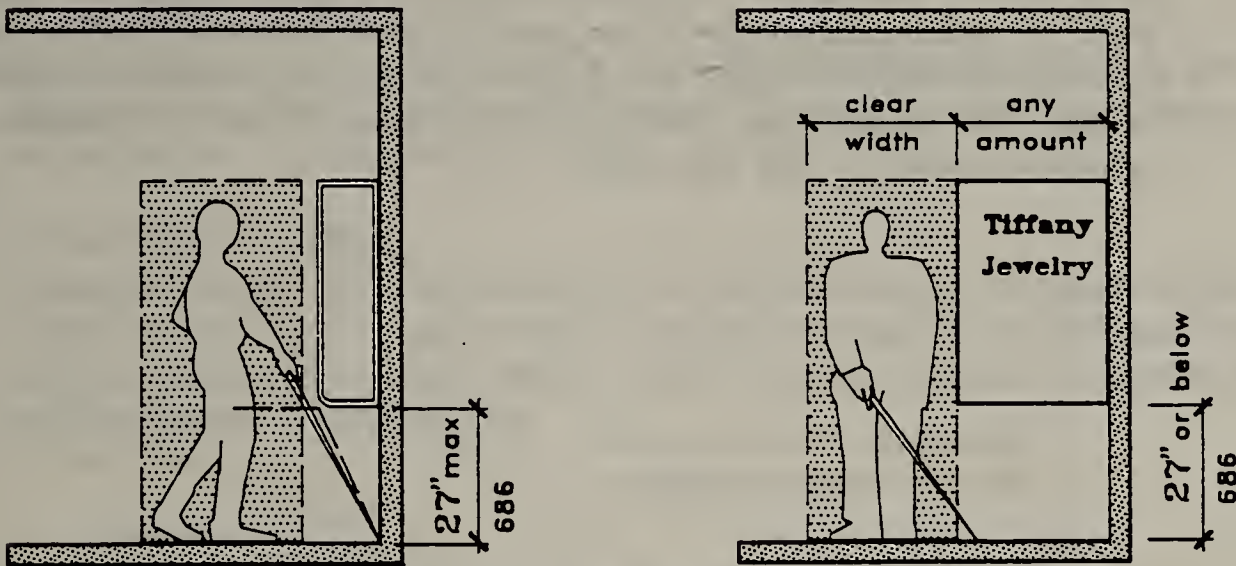
Walking Parallel to a Wall

Figure 20d



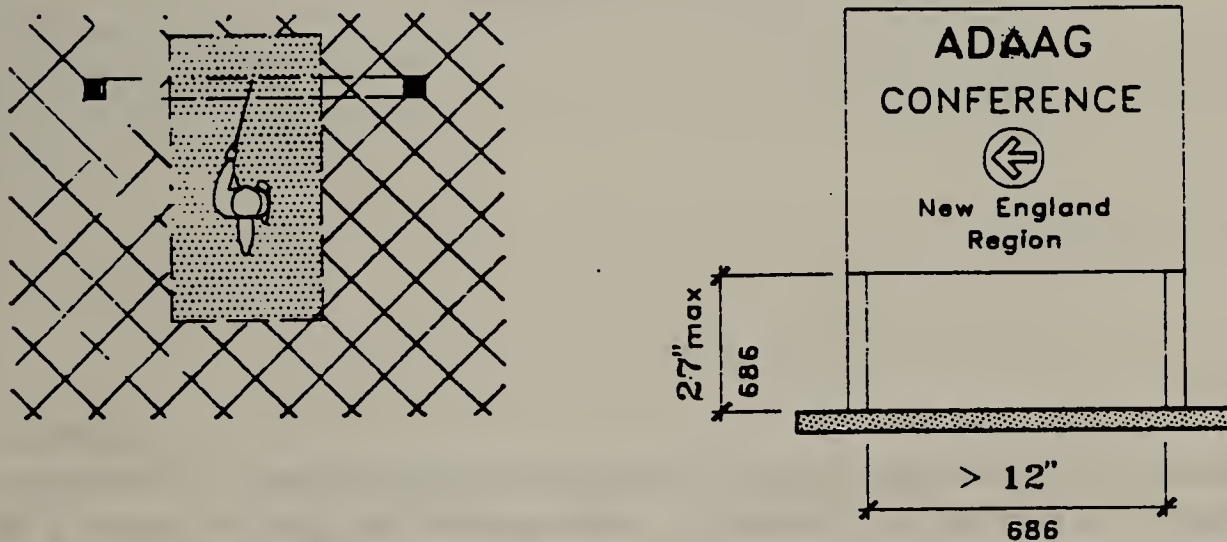
## Accessible Route

- 20.6.2 Objects mounted with their leading edges at or below twenty-seven inches (27" = 686mm) above the finished floor may protrude any distance. See Fig. 20 e.



Walking Perpendicular to a Wall      Parallel to a Wall  
Figure 20e

- 20.6.3 Free-standing objects mounted on posts or pylons may have a maximum overhang of twelve inches (12" = 305mm) between twenty-seven inches and eighty inches (27" and 80" = 686mm and 2032mm) above the ground or finished floor. See Fig. 20f.



Objects Mounted on Posts or Pylons  
Figure 20f



**Accessible Route****20.7 HEADROOM**

*Walks, halls, corridors, passageways, aisles, or other circulation spaces shall have eighty inches (80" = 2032mm) minimum clear headroom. See Fig. 20d. If vertical clearance of an area adjoining an accessible route is reduced to less than eighty inches (80" = 2032mm)(nominal dimension), a barrier shall be provided to warn blind or visually-impaired persons of the reduced headroom. See Fig. 20g.*

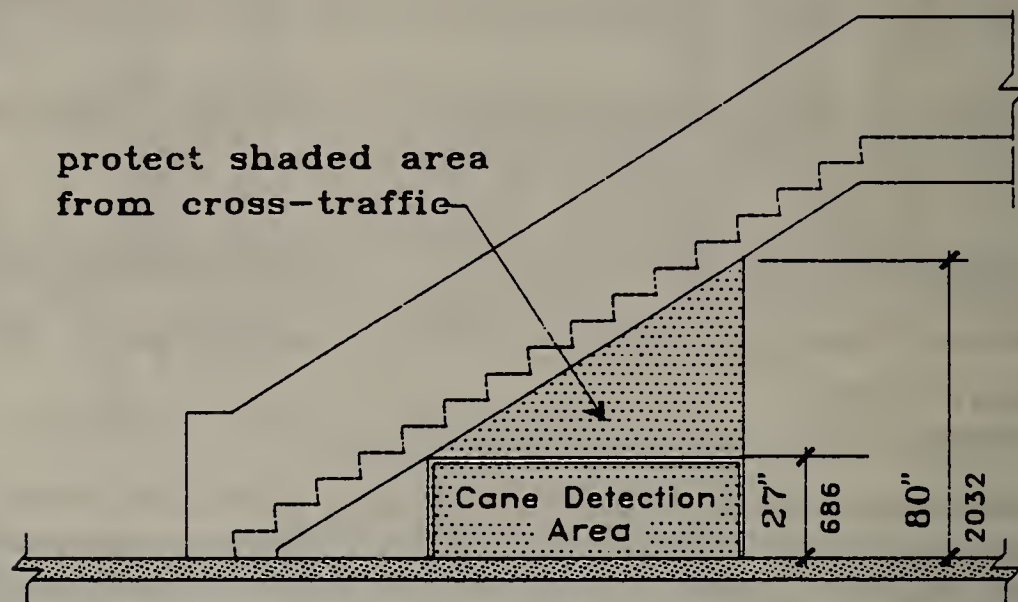


Figure 20g

## Accessible Route

20.8

### SURFACE TEXTURES

The surface of an *accessible route* shall comply with Section 29, Floor Surfaces.

20.9

### SLOPE AND CROSS SLOPE

An *accessible route* with a *running slope* greater than 1:20 (5%) is a *ramp* and shall comply with Section 24, Ramps. Nowhere shall the *cross slope* of an *accessible route* exceed 1:50 (2%).

20.10

### CHANGES IN LEVELS

Changes in levels along an *accessible route* shall comply with Section 29.2, Level Changes. If an *accessible route* has changes in *level* greater than one-half inch ( $1/2" = 13\text{mm}$ ), then a *curb cut*, *ramp*, elevator, or platform lift shall be provided. See Fig 20h.

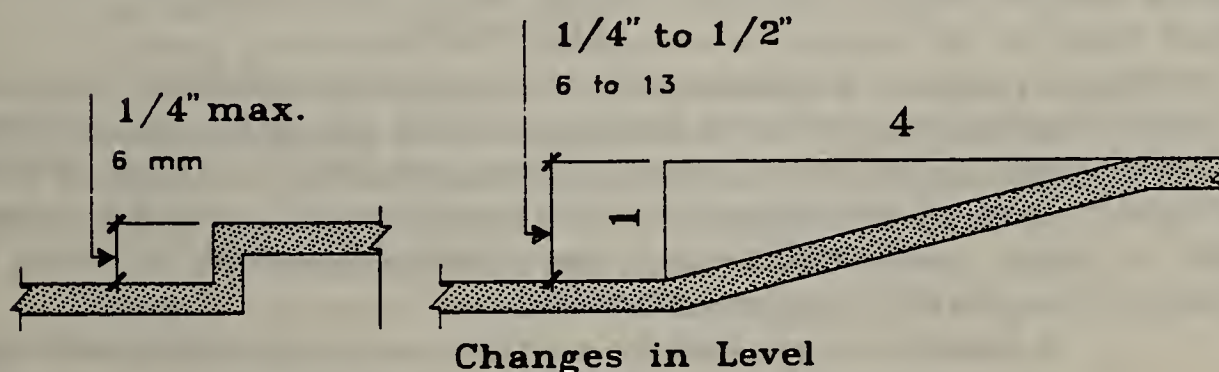


Figure 20h

20.11

### EGRESS

*Accessible routes* serving any *accessible space* or *element* shall also serve as a *means of egress* for emergencies or connect to an *accessible area* of rescue assistance.

20.12

### AREAS OF RESCUE ASSISTANCE

Shall be provided where an *accessible means of egress* is not provided and shall comply with the following requirements:

Exception: Areas of rescue assistance are not required in *buildings* or facilities having a supervised automatic sprinkler system.



## Accessible Route

20.12.1 Location and Construction: An *area of rescue assistance* shall be one of the following:

- a. A portion of a stairway landing within a smokeproof enclosure (complying with applicable requirements of the State Building Code). See Fig. 20i.

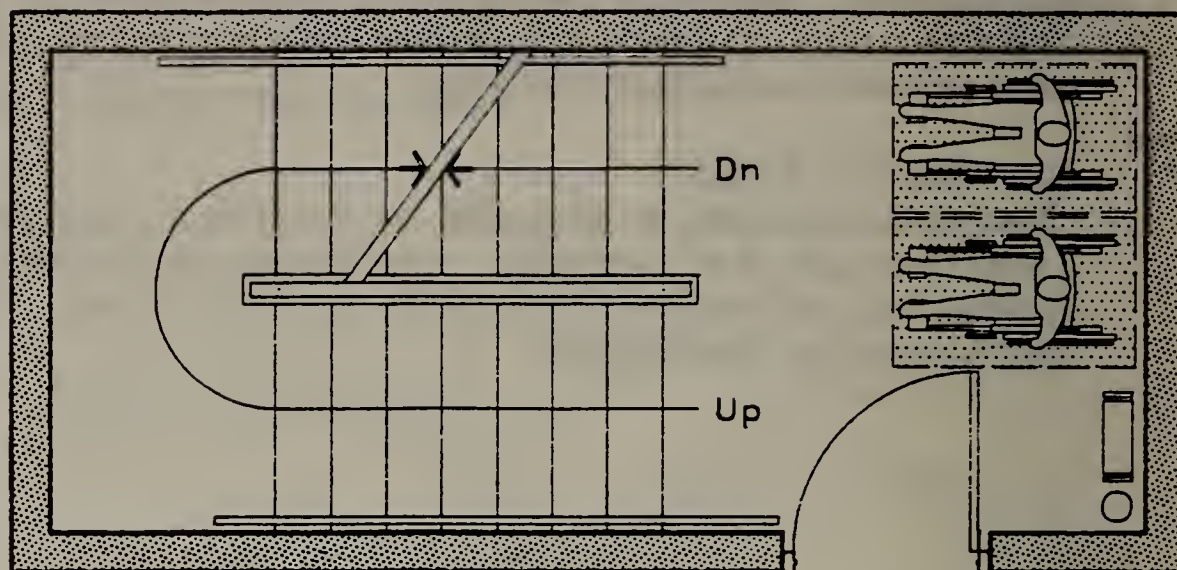


Figure 20i

- b. A portion of an exterior exit balcony located immediately adjacent to an exit stairway when the balcony complies with applicable requirements of the State Building Code for exterior exit balconies. Openings to the interior of the *building* located within twenty feet (20' = 6m) of the *area of rescue assistance* shall be protected with fire assemblies having a three-fourths hour fire protection rating.
- c. A portion of a one hour fire-resistive corridor (complying with applicable requirements of the State Building Code for fire-resistive *construction* and for openings) located immediately adjacent to an exit enclosure; (See Fig. 20j)

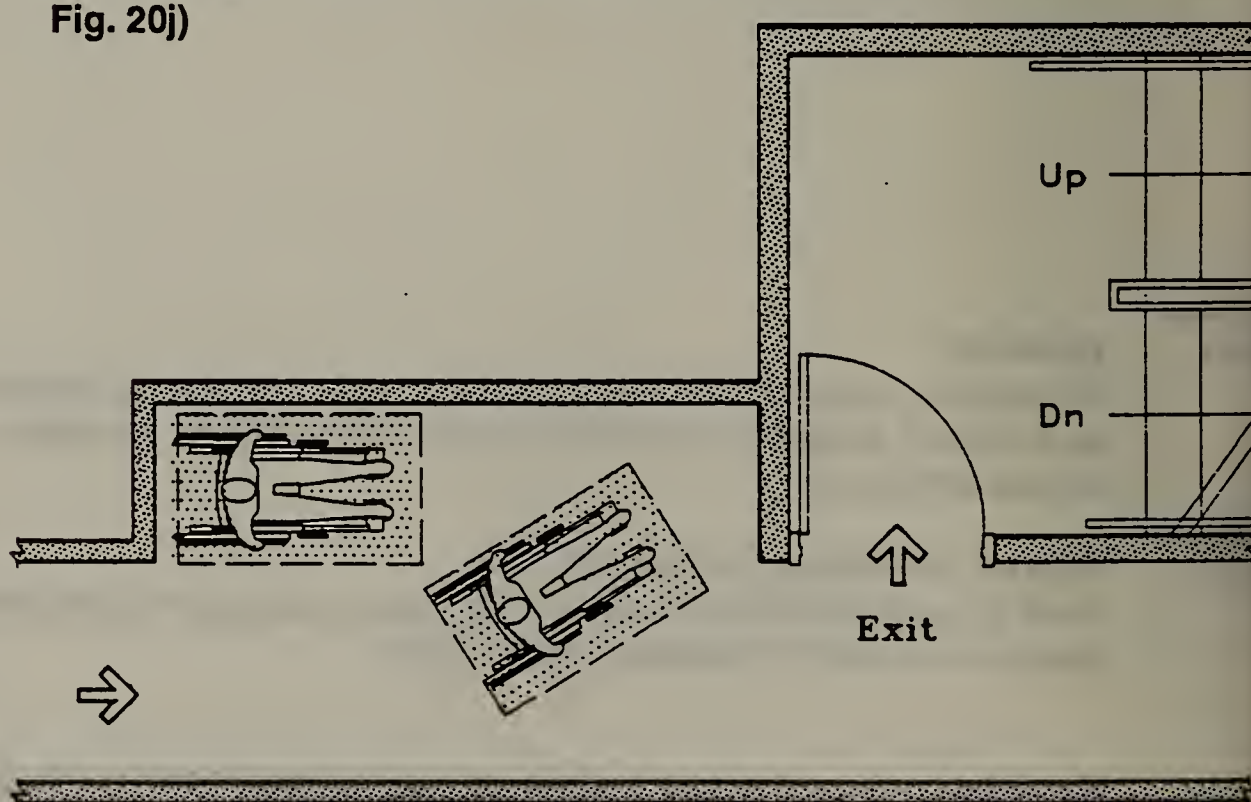


Figure 20j



**Accessible Route**

- d. A vestibule located immediately adjacent to an exit enclosure and constructed to the same fire-resistive standards controlling corridors and openings.
- e. A portion of a stairway landing within an exit enclosure which is vented to the exterior and is separated from the interior of the *building* with not less than one hour fire-resistive doors.
- f. When approved by the appropriate applicable building official, an area or a room that is separated from other portions of the *building* by a smoke barrier. Smoke barriers shall have a fire-resistive rating of not less than one hour and shall completely enclose the area or room. Doors in the smoke barrier shall be tight-fitting smoke- and draft-control assemblies having a fire-protection rating of not less than 20 minutes and shall be self-closing or automatic closing. The area or room shall be provided with an exit directly to an exit enclosure. Where the room or area exits into an exit enclosure which is required to be of more than one hour fire-resistive *construction*, the room or area shall have the same fire-resistive *construction*, including the same opening protection, as required for the adjacent exit enclosure
- g. An elevator lobby where elevator shafts and adjacent lobbies are pressurized as required for smokeproof enclosures by the State Building Code or the regulations of the State Board of Elevator Regulations, and when complying with requirements herein for size, communication, and *signage*. Such pressurization system shall be activated by smoke detectors on each floor located in a manner approved by the appropriate local authority. Pressurization equipment and its duct work within the *building* shall be separated from other portions of the *building* by a minimum two-hour fire resistive *construction*.

20.12.2 Size: Each *area of rescue assistance* shall provide at least two *accessible* areas each being not less than thirty inches by forty-eight inches (30" x 48" = 762mm by 1219mm).

- a. The *area of rescue assistance* shall not encroach on any required exit width.
- b. The total number of such thirty inch by forty-eight inch (30" x 48" = 762mm by 1219mm) areas per *story* shall be not less than one for every 200 persons of calculated occupant load served by the *area of rescue assistance*.

20.12.4 Stairway Width: Each stairway adjacent to an *area of rescue assistance* shall have a minimum *clear* width of forty-eight inches (48" = 1219mm) between handrails.

20.12.5 Two-way Communication: A method of two-way communication, with both visible and audible signals, shall be provided between each *area of rescue assistance* and the primary *entrance* to the *building*. The fire department or appropriate building official may approve a location other than the primary *entrance* to the *building*. Any operable mechanism shall comply with Section 39, Controls.

**Accessible Route**

- 20.12.6 Identification: Each *area of rescue assistance* shall be identified by a sign that states "*area of rescue assistance*" and displays the international symbol of accessibility. The sign shall be illuminated when exit sign illumination is required. *Signage* shall also be installed at all inaccessible exits and where otherwise necessary to clearly indicate the direction to areas of rescue assistance. In each *area of rescue assistance*, instructions on the *use* of the area under emergency conditions shall be posted adjoining the two-way communication system.



## Curb Cuts

## 21.1 GENERAL

- Whenever *sidewalks*, *walkways*, or curbs on streets and ways are constructed, reconstructed, or repaired, *curb cuts* are required. All *curb cuts* shall comply with the following:

## 21.2 LOCATION

*Curb cuts* shall occur wherever an *accessible route* crosses a curb and at the following locations:

- 21.2.1 At each corner of each intersection, located within the crosswalk and/or the pedestrian *path of travel*.
- 21.2.2 Reciprocal *curb cuts*. When *curb cuts* or *sidewalks* are being constructed or reconstructed on one side of the street, and when such *curb cuts* or *sidewalks* are connected to an opposite side of the street by one or more pedestrian *paths of travel*, then at least one *curb cut* shall be provided on the opposite side of the street where such side is controlled by the same owner.
- 21.2.3 Driveways: At driveways intersecting *sidewalks* when the driveway has side curbs.
- 21.2.4 Raised Islands: Any raised islands in crossings shall be cut through *level* with the street or have *curb cuts* at both sides and a *level* area at least forty eight inches (48" = 1219mm) long between the *curb cuts* in the part of the island intersected by the crossings. See Fig. 21a.

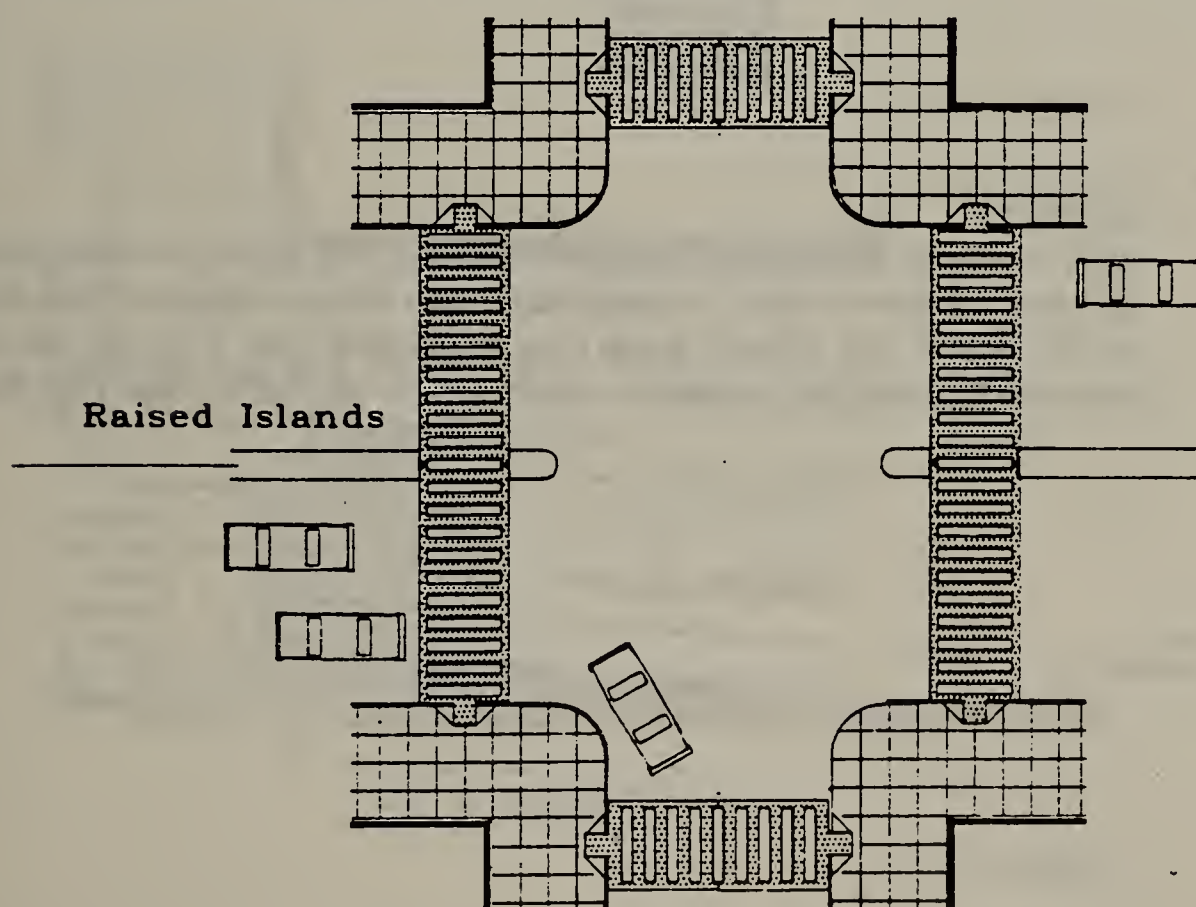


Figure 21a



## Curb Cuts

- 21.2.5 Obstructions: *Curb cuts* shall be located or protected to prevent their obstruction by parked vehicles See Fig. 21b.
- 21.2.6 Location at *Marked crossings*: *Curb cuts* at *marked crossings* shall be wholly contained within the markings, excluding any flared sides. See Fig. 21c.

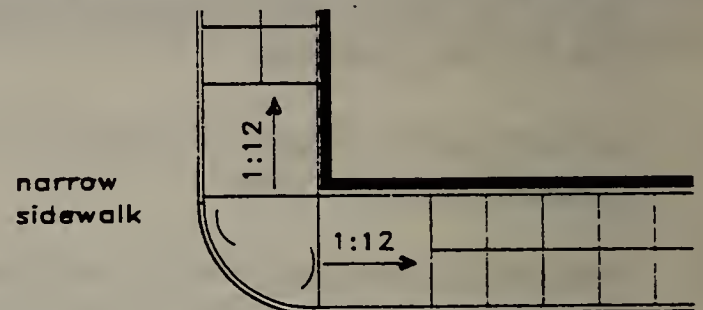


Figure 21b

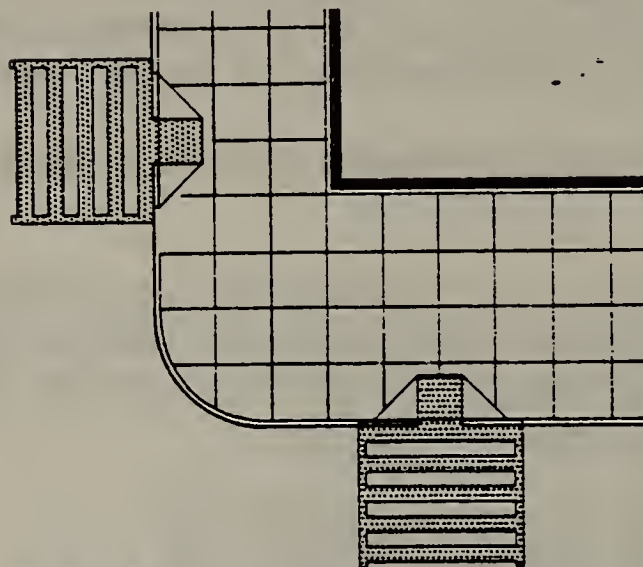


Figure 21c

## 21.3

## SLOPE

The maximum slope shall be one-in-twelve (1:12) (8.3%). Where *sidewalks* are too narrow to install a straight-line *curb cut* at a slope of one-in-twelve (1:12) (8.3%), the primary slope may be steeper than 1:12 but the sides of the *curb cut* shall not exceed one-in-twelve (1:12) (8.3%). See Fig. 21d.

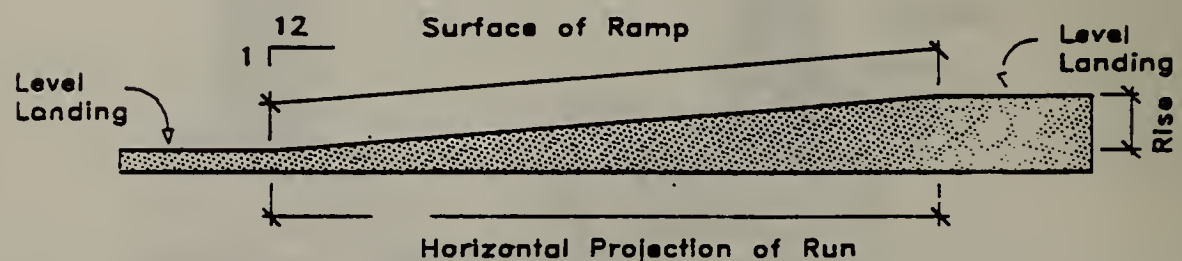


Figure 21d

## Curb Cuts

## 21.4 TRANSITIONS

Transitions from *curb cuts* to *walks*, gutters, or streets shall be flush and free of changes in *level* greater than 1/2 inch ( $1/2" = 13\text{mm}$ ). Maximum slopes of adjoining gutters, road surface immediately adjacent to the *curb cuts*, or *accessible route* shall not exceed 1:20 (5%).

## 21.5 DRAINAGE

Grading and drainage shall be designed to minimize pooling of water, accumulation of ice, or flow of water across the base of the *curb cut*.

## 21.6 WIDTH

The minimum width of a *curb cut* shall be thirty-six inches ( $36" = 914\text{mm}$ ), exclusive of flared sides.

## 21.7 FLARED SIDES

Sides of *curb cuts* shall extend at least twenty-four inches ( $24" = 610\text{mm}$ ) at the curb. The maximum slope of the flare is one-in-ten (1:10) (10%). Curbing at the flared sides must blend with the slope of the flared sides.

## 21.8 RETURNED SIDES

*Curb cuts* with returned sides are only permitted where they are protected by handrails pursuant to **Section 24.5, Handrails** or where pedestrian travel across the *ramp* is obstructed by permanently installed street hardware or landscaping. See Fig. 21e.

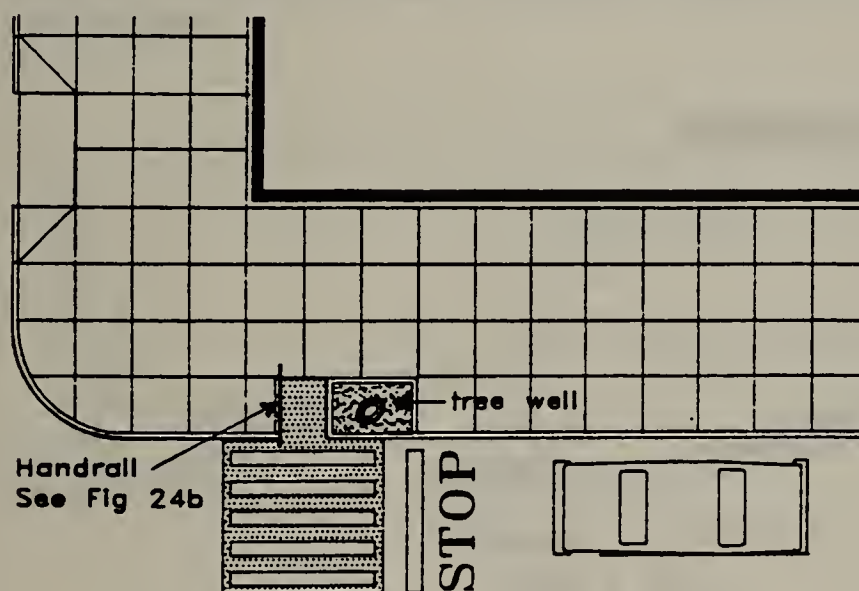


Figure 21e Curb cut with returned sides

**Curb Cuts****21.9 BUILT-UP CURB CUTS**

Built-up *curb cuts* shall be located only where they do not project into vehicular traffic lanes. See Fig. 21f.

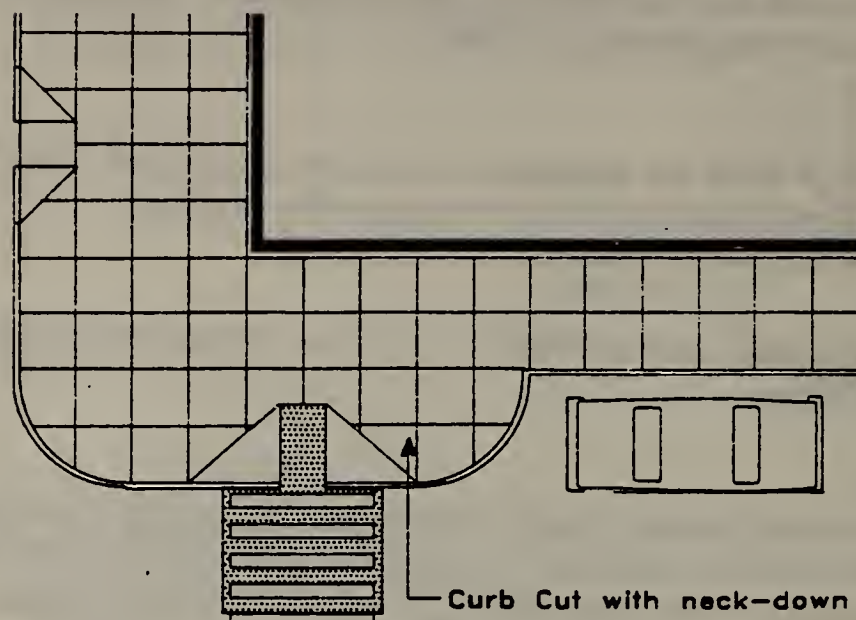


Fig. 21f.

**21.10 DETECTABLE WARNINGS  
(Reserved)**



## Walkways

## 22.1 GENERAL

Walkways shall include but not be limited to all walks, overpasses, bridges, tunnels, underpasses, plazas, courts and other pedestrian pathways, and shall comply with the following requirements:

## 22.2 WIDTH

Width of walkways shall be not less than forty-eight inches (48" = 1219mm). Unobstructed *path of travel* shall be thirty-six inches (36" = 914mm) *clear* excluding curb stones.

## 22.3 GRADE

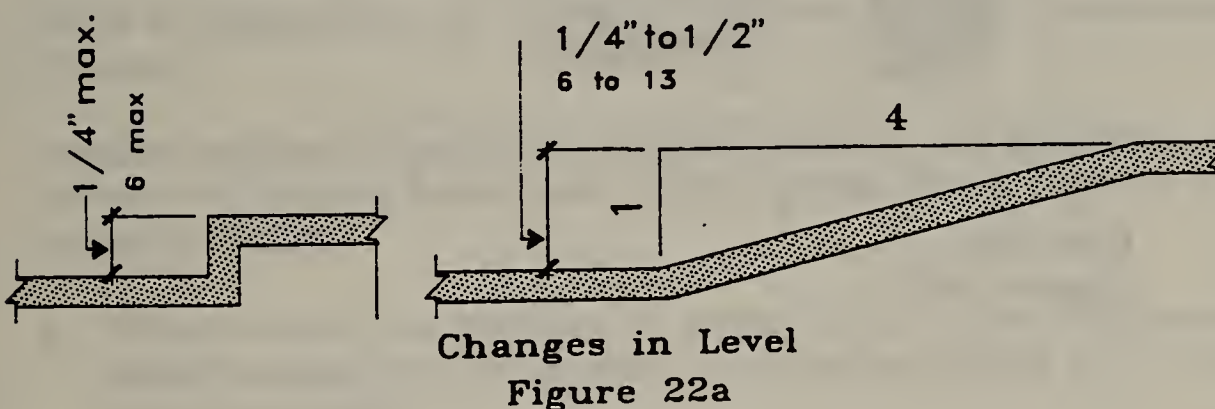
Walkways with a *running slope* greater than one-in-twenty (1:20) (5%) are ramps and shall comply with Section 24, Ramps.

22.3.1 Nowhere shall the *cross slope* of walkways exceed one-in-fifty (1:50) (2%).

Exception: *Sidewalks* on streets and ways shall be considered walkways, with the exception that if the slope of the natural topography exceeds one-in-twenty (1:20) (5%) a ramp is required.

## 22.4 LEVEL CHANGES

Walkways shall have continuous common surfaces, not interrupted by steps or changes in *level* greater than one-quarter inch (1/4" = 6mm).

22.4.1 Changes in *level* between one-quarter inch and one-half inch (1/4" and 1/2" = 6mm and 13mm) shall be beveled with a slope no greater than (1:4) (25%). See Fig. 22a.22.4.2 Changes in *level* greater than one-half inch (1/2" = 13 mm) shall require a ramp, elevator, or platform lift that complies with Section 24, Ramps or Section 28, Elevators.

## Walkways

### 22.5 SURFACE

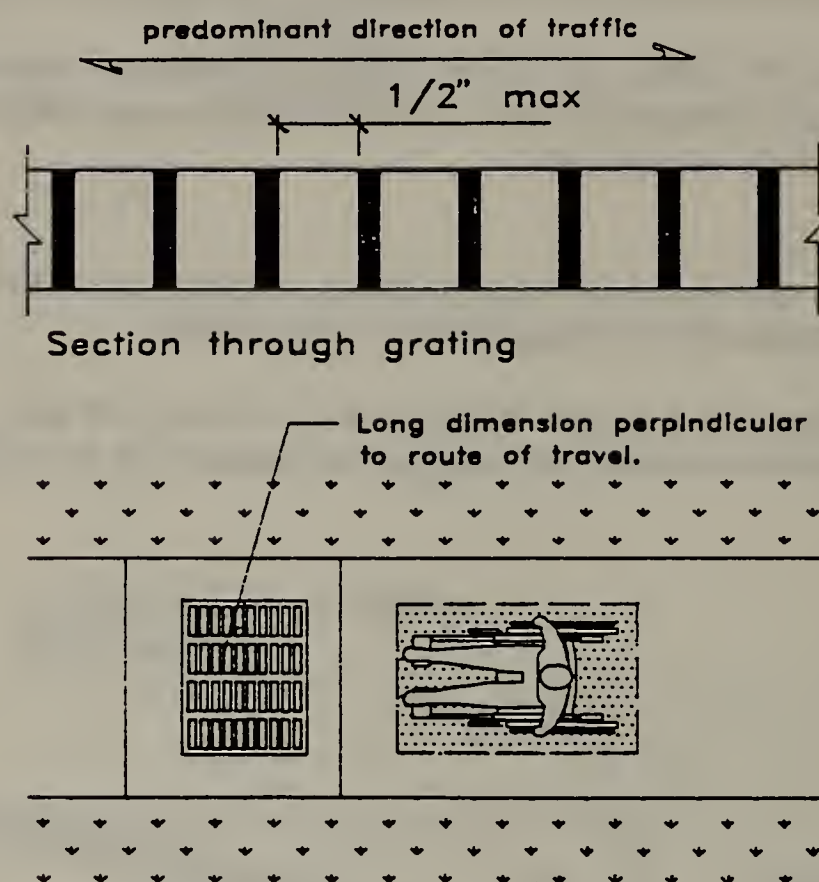
Walkway surfaces shall be stable, firm, and *slip resistant*. Only a *slip resistant* finish material may be applied to any walk or walkway.

### 22.6 DRAINAGE

Grading and drainage shall be designed to minimize pooling of water or accumulation of ice or flow of water across *walkways*.

### 22.7 GRATINGS

If gratings are located in walking surfaces, they shall have spaces no greater than one-half inch ( $1/2'' = 13\text{mm}$ ) wide in one direction. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel. See Fig. 22b.



Gratings  
Figure 22b

### 22.8 INTERSECTIONS

Wherever a *walkway* crosses or joins streets, public ways, driveways or parking lots, it shall comply with the following:

- 22.8.1 The intersecting surfaces shall blend to a common *level* with a slope no greater than 1:20 (5% ), or a *curb cut* shall be installed in compliance with Section 21, Curb Cuts.



## Parking and Passenger Loading Zones

### 23.1 GENERAL

Any person who has lawful control of improved or enclosed private property used as off-street parking for businesses, auditoriums, sporting or recreational facilities, cultural centers, or general *public use* where the public has the right of access as invitees or licensees, shall cause such parking areas to comply with these Regulations. For parking related to residential and *transient lodging* facilities, see Sections 8, Transient Lodging Facilities and 9, Multiple Dwellings.

### 23.2 NUMBER

*Accessible* spaces shall be provided as follows:

#### 23.2.1 Total Parking in Lot                      Required Minimum Number of Accessible Spaces

15-25	1
26-50	2
51-75	3
76- 100	4
101-150	5
151-200	6
201-300	7
301-400	8
401-500	9
501-1,000	2 percent of total
1,001 and over	20 plus 1 for each 100 over 1000

23.2.2 One in every eight *accessible* spaces, but not less than one, shall be van *accessible*.

23.2.3 Spaces required by the table need not be provided in a particular lot. They may be provided in a different location if equivalent or greater accessibility, in terms of distance from an *accessible entrance*, cost and convenience, is ensured.

23.2.4 Medical Facilities: At facilities providing medical care and other services for persons with mobility impairments, parking spaces shall comply with 23.2.1 except as follows:

- a. Outpatient units and facilities: Ten percent (10%) of the total number of parking spaces provided to serve each such outpatient unit or *facility* shall be *accessible*.
- b. Units and facilities that specialize in treatment or services for persons with mobility impairments: Twenty percent (20%) of the total number of parking spaces provided, serving each such unit or *facility*, shall be *accessible*.



**Parking and Passenger Loading Zones**

**23.3 LOCATION**

*Accessible* parking spaces shall be located as follows:

23.3.1 *Accessible* parking spaces serving a particular *building* shall be located on the shortest *accessible route* of travel from adjacent parking to an *accessible entrance*.

23.3.2 In parking facilities that do not serve a particular *building*, *accessible* parking shall be located on the shortest *accessible route* of travel to an *accessible pedestrian entrance* of the parking *facility*.

23.3.3 In *buildings* with multiple *accessible entrances* with adjacent parking, *accessible* parking spaces shall be dispersed and located closest to the *accessible entrances*.

Exception: Where *accessible* spaces cannot be located within two-hundred feet (200' = 61m) of an *accessible entrance*, an *accessible* passenger drop-off area shall be provided within one-hundred feet (100' = 30m) of an *accessible entrance*.

23.3.4 Garages: In multi-level garages where no elevator is provided, such spaces shall all be located near the *accessible entrance*. See special van requirement in Section 23.4.7.

---

**23.4 PARKING SPACES**

Shall comply with the following:

23.4.1 Width: *Accessible* parking spaces shall be at least ninety-six inches (96" = 2438mm) wide.

23.4.2 Length: The length of *accessible* parking spaces shall be at least the same as for parking spaces generally in accordance with the State Building Code or local zoning requirements. Parked vehicles shall not reduce the *clear* width of an *accessible route* by overhanging or protruding into it.

23.4.3 Slope: Parking spaces shall be *level* with surface slopes not exceeding 1:50 (2%) in all directions.

23.4.4 Surface: Spaces shall have a uniform, paved or hard packed smooth surface.

23.4.5 Delineation: *Accessible* spaces shall be marked by high contrast painted lines or other high contrast delineation.

## Parking and Passenger Loading Zones

- 23.4.6 *Access aisles* : All *accessible* spaces shall have *access aisles* that comply with the following:
- Parking *access aisles* shall be part of an *accessible route* to the *building* or *facility entrance* and shall comply with **Section 20, Accessible Route**.
  - Access aisles* adjacent to *accessible* spaces shall be sixty inches (60" = 1524mm) wide minimum, except adjacent to van *accessible spaces* the *access aisle* shall be a minimum of ninety-six inches (96" = 2438mm) wide.
  - Two *accessible* parking spaces may share a common *access aisle*. See Fig. 23a and 23b.
  - Access aisles* shall be *level* with surface slopes not exceeding 1:50 (2%) in all directions.
  - Access aisles* shall be painted with diagonal stripes.

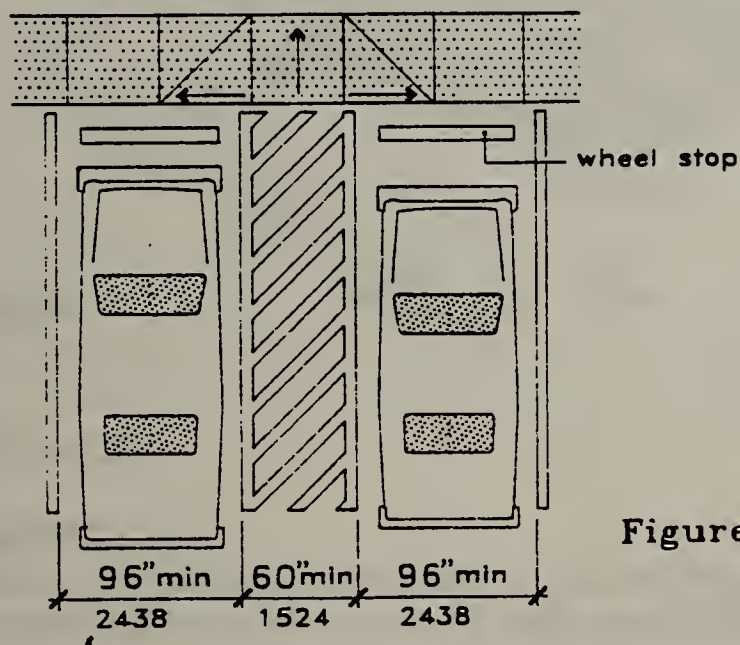


Figure 23a

## Parking and Passenger Loading Zones

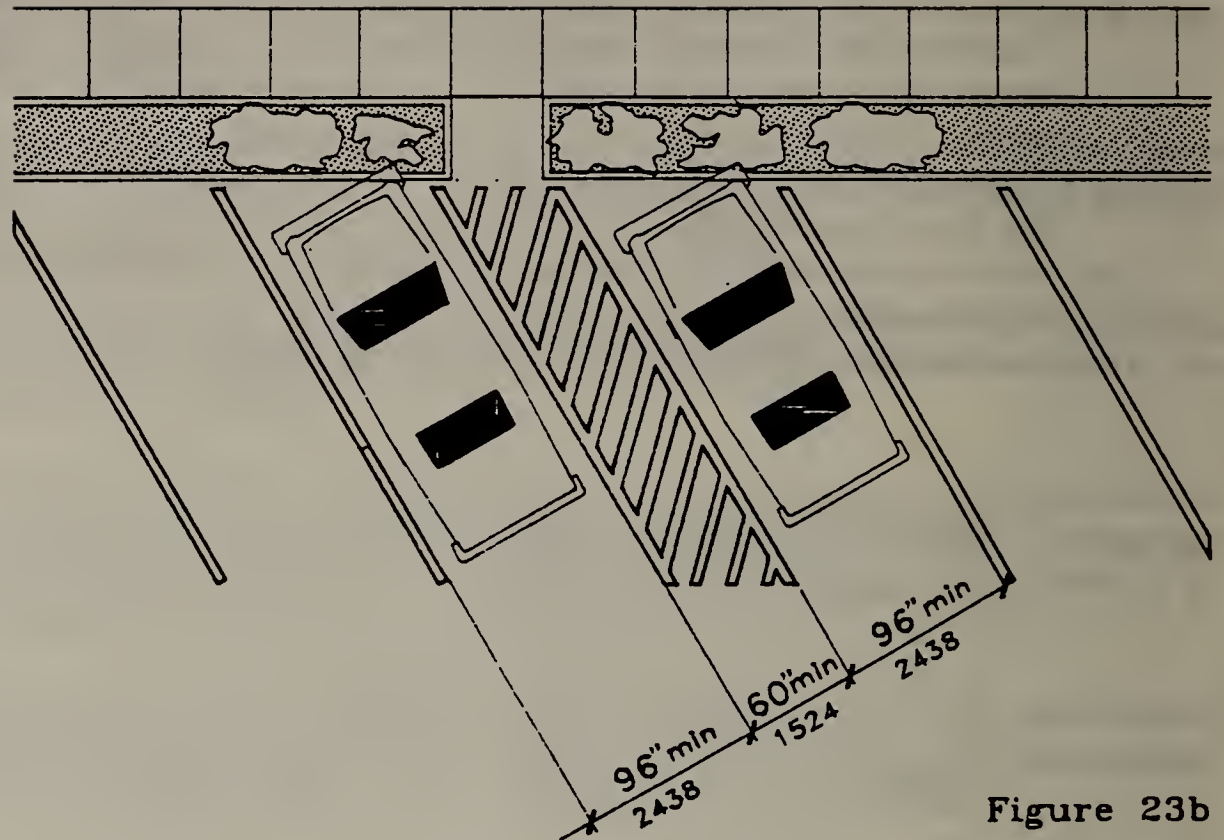


Figure 23b

### 23.4.7 Van Accessible spaces shall comply with the following:

- Provide minimum vertical clearance of ninety-eight inches (98" = 2489mm) at the parking *space* and along at least one vehicle access *route* to such spaces from *site entrance(s)* and *exit(s)*. See Fig. 23c.
- Each shall have a sign designating it "Van Accessible" as required by Section 23.6.
- All such spaces may be grouped on one level of a parking structure.
- Ninety-six inch minimum (96" = 2438mm) wide *space*.
- Provide access as per Section 23.4.6. See Fig. 23c.

Exception: Van *accessible* spaces do not have to be separately provided if all required parking spaces are one hundred and thirty-two inches wide (132" = 3353mm) with a sixty inch (60" = 1524mm) access aisle.



## Parking and Passenger Loading Zones

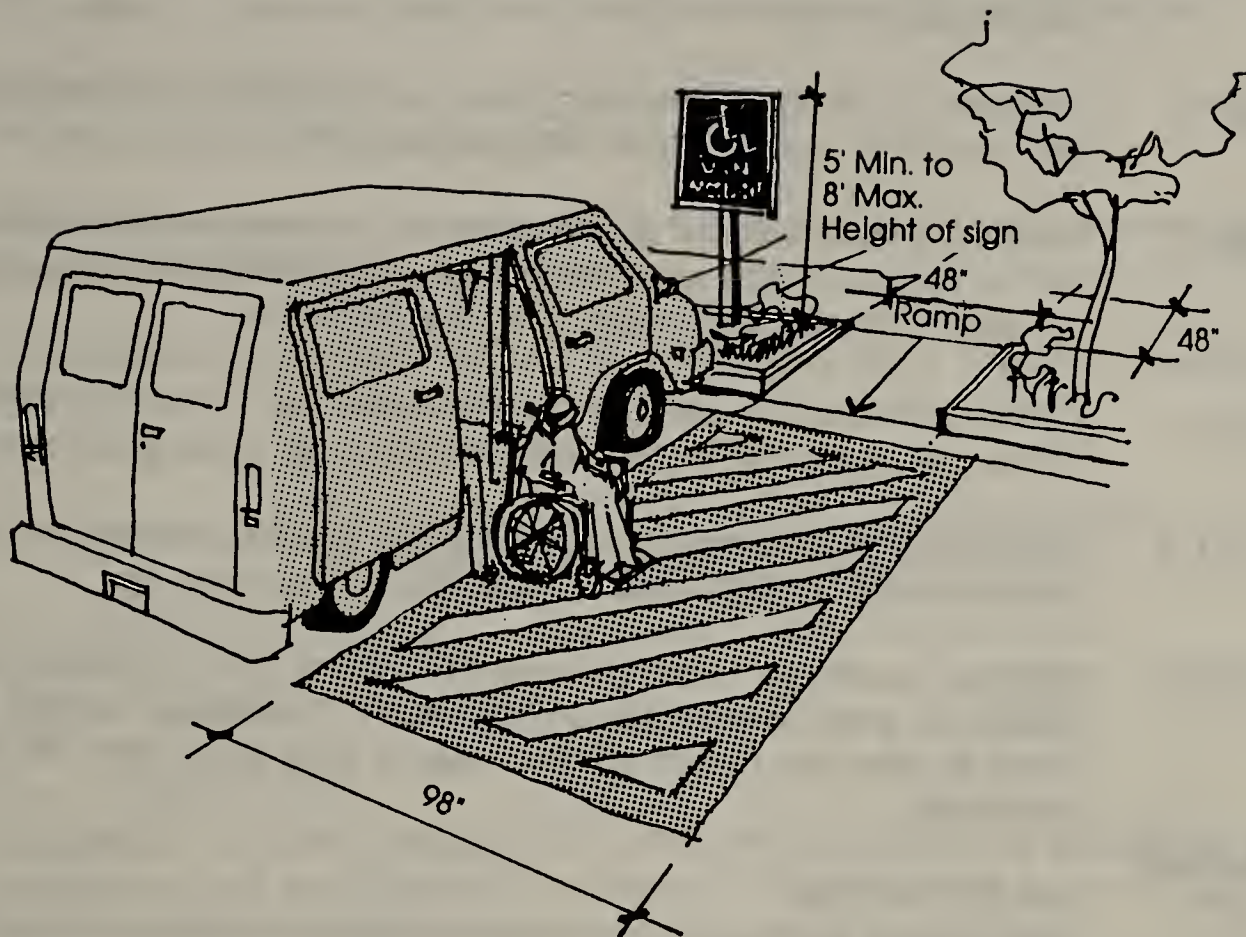


Figure 23c

### 23.5 SIDEWALKS

Where *sidewalks* are provided at such parking spaces, a *curb cut* shall be installed at the *access aisle* of each *accessible space* or pair of spaces, so that persons using the spaces are not required to enter the stream of traffic to attain access to *sidewalks*.

### 23.6 SIGNAGE

*Accessible* parking spaces shall be identified by signs indicating that they are reserved.

23.6.1 A sign shall be located at the head of each *space* or no more than ten feet (10' = 3048mm) away, and at the head of a pair of spaces, and at *accessible* passenger loading zones.

23.6.2 The sign shall show the international symbol of accessibility.

23.6.3 *Van accessible* spaces shall have an additional sign, "Van-Accessible," mounted below the symbol of accessibility.

23.6.4 Such signs shall be located at a height of not less than five feet (5' = 1524mm), nor more than eight feet (8' = 2438mm) to the top of the sign.

**Parking and Passenger Loading Zones**

**23.7 PASSENGER LOADING ZONE**

If passenger loading zones are provided, at least one of them shall comply with the following:

- 23.7.1 Wherever a passenger loading zone or parking area is provided, an *accessible route* to an *accessible entrance* is required.
- 23.7.2 Passenger loading zones shall provide an *access aisle* at least sixty inches (60" = 1524mm) wide and twenty feet (20' = 6096mm) long, adjacent and parallel to the vehicle pull-up *space*. See Fig. 23c.
- 23.7.3 If there are curbs between the *access aisle* and the vehicle pull-up *space*, then a *curb cut* complying with **Section 21, Curb Cuts**, shall be provided.
- 23.7.4 Vehicle standing spaces and *access aisles* shall be *level* with surface slopes not exceeding 1:50 (2%) in all directions.
- 23.7.5 Vertical Clearance: A minimum of 114 inches (114" = 2896mm) of vertical clearance shall be provided at *accessible* passenger loading zones and along at least one vehicle access *route* to such areas from *site entrance(s)* and exit(s).

---

**23.8 VALET PARKING**

Valet parking facilities shall provide a passenger loading zone complying with **Section 23.7** located on an *accessible route* to the *entrance* of the *facility*. **Section 23.2 and 23.4.7** of this section do not apply to valet parking facilities.



## Ramps

## 24.1 GENERAL

Any part of an *accessible route* with a slope greater than 1:20 (5%) shall be considered a *ramp* and shall comply with the requirements of this Section.

## 24.2 SLOPE AND RISE

*Ramps* shall have the least possible slope.

24.2.1 The maximum slope of a *ramp* shall be 1:12 (8.3%), measured between any two points on the ramp.

24.2.2 The maximum rise for any run shall be thirty inches (30" = 762mm). See Fig. 24a.

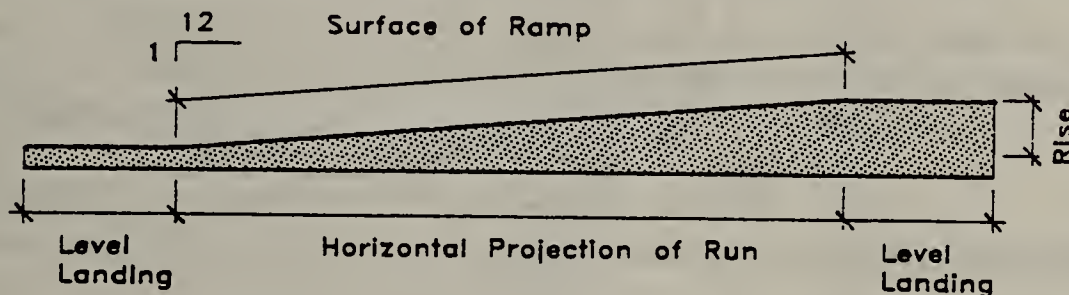


Figure 24a

Exceptions: A slope between 1:10 (10%) and 1:12 (8.3%) is allowed for a maximum rise of three inches (3" = 76mm).

## 24.3 CLEAR WIDTH

The minimum *clear* width of a *ramp* shall be forty-eight inches (48" = 1219mm), measured between the railings. See Fig. 24b.

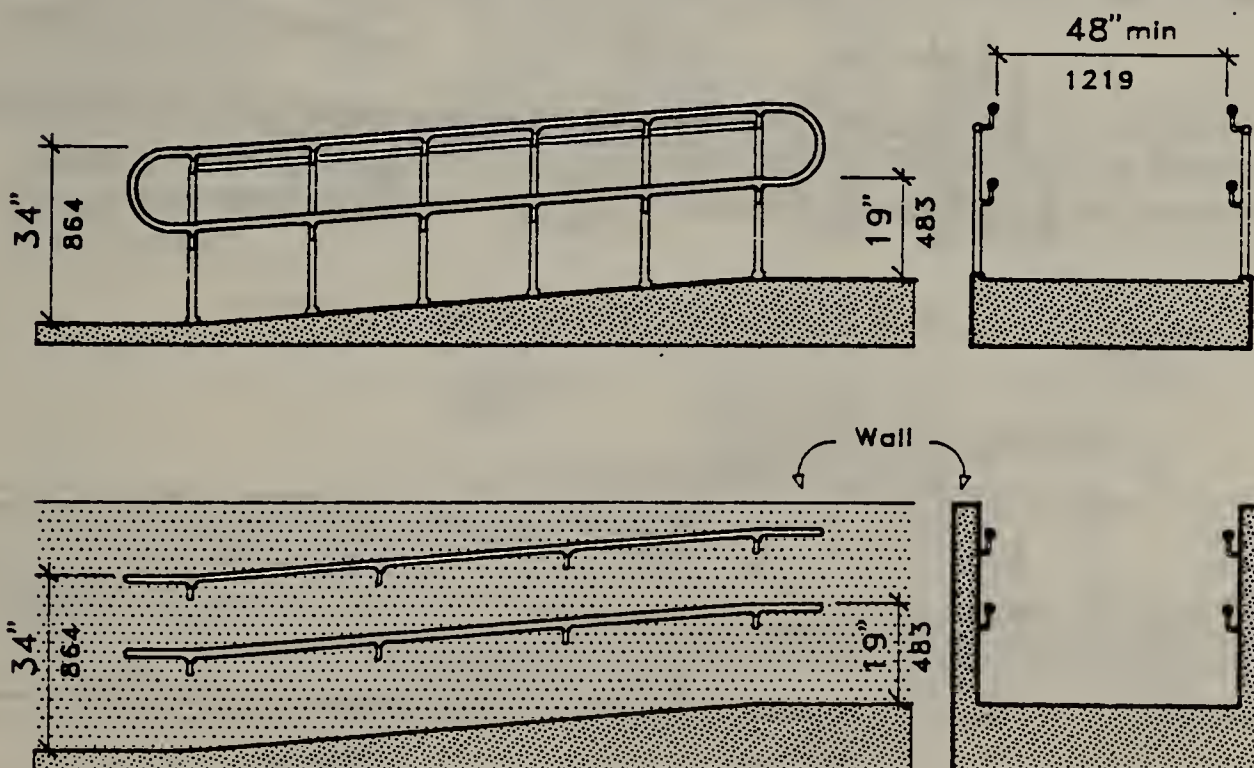


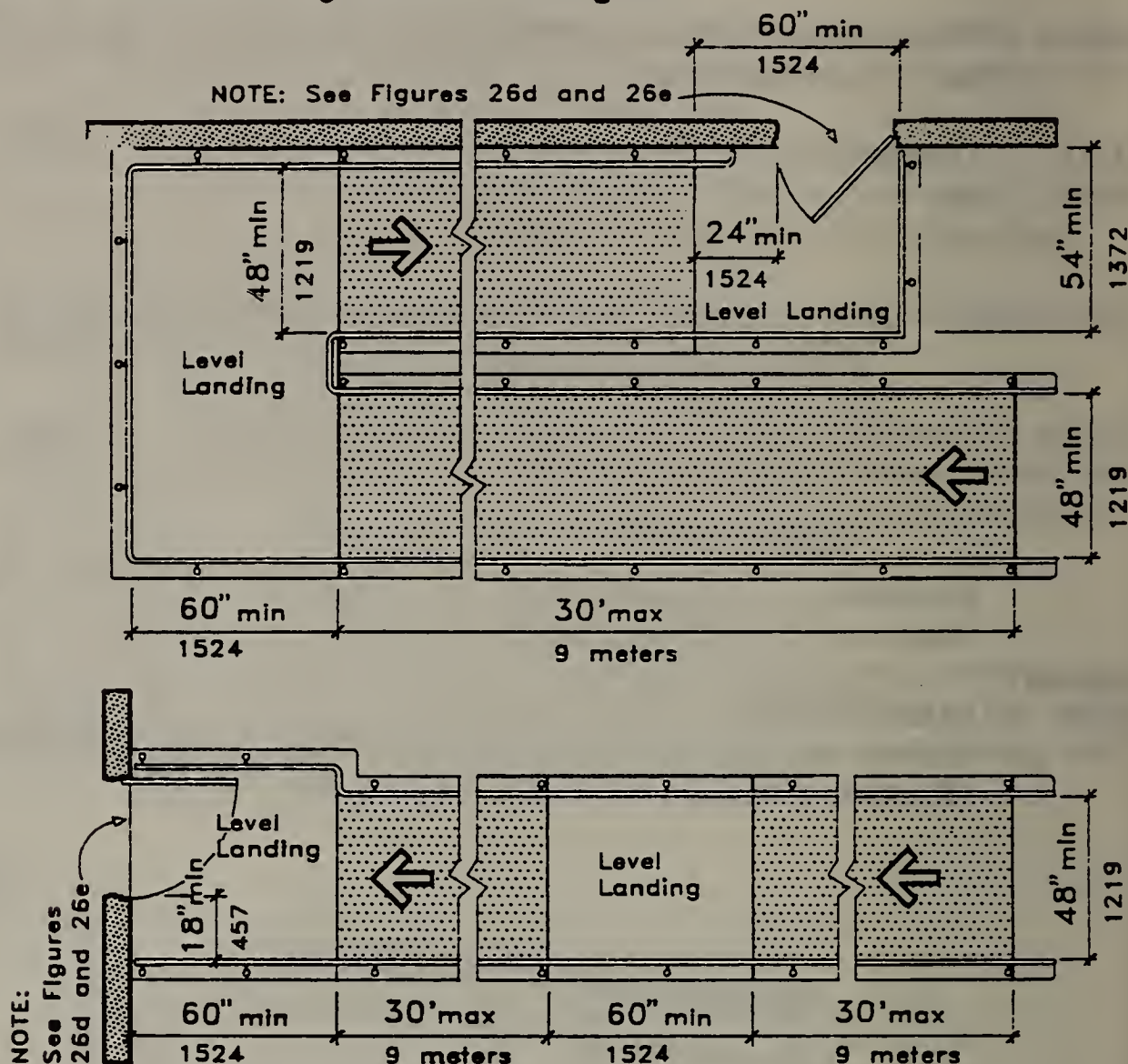
Figure 24b



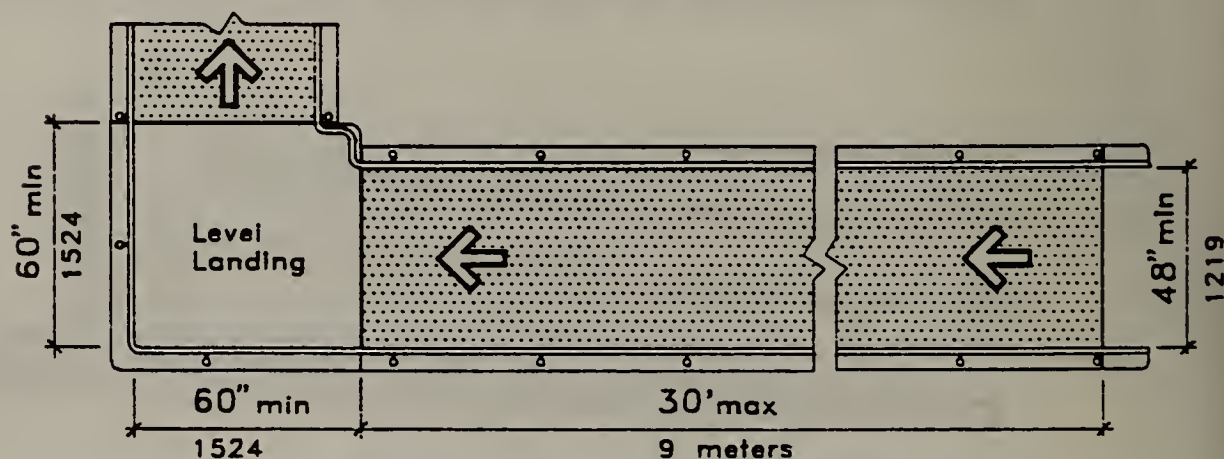
## Ramps

## 24.4 LANDINGS

Ramps shall have landings for turning and resting. At a minimum, landings shall be located at the bottom and the top of each ramp and each ramp run, and whenever a ramp changes direction. The maximum length of a ramp run between landings shall not exceed thirty feet (30' = 9m). Landings shall have the following features: See Fig. 24c.



## Maneuvering Clearances at Doors



## Minimum Landing Size for Change of Direction

Figure 24c

## Ramps

- 24.4.1 General: Landings shall be *level* and unobstructed by projections and door swings, except as permitted by **Section 24.4.6**.
- 24.4.2 Width: The landing shall be at least as wide as the *ramp* run leading to it.
- 24.4.3 Length: The landing length shall be a minimum of sixty inches (60" = 1524mm) *clear*.
- 24.4.5 Dimensions for turning: If *ramps* change direction at landings, the minimum landing size shall be sixty inches by sixty inches (60" by 60" = 1524mm by 1524mm). See **Fig. 24c**.
- 24.4.6 Doorways at Landings: If a doorway is located at a landing, then the *level* area in front of the doorway shall also comply with maneuvering clearances in **Fig. 26d** and **26e**.

## 24.5 HANDRAILS

Handrails shall be provided at all *ramps*. Handrails shall have the following features:

- 24.5.1 Location: Handrails shall be provided along both sides of *ramp* segments.
- 24.5.2 Heights: Handrails shall be provided in pairs, one at a height of thirty-four inches (34" = 864mm), and a lower one at a height of nineteen inches (19" = 483mm), measured vertically from the surface of the *ramp* to top of handrail.
- 24.5.3 Continuous surface: Handrails shall be continuous without interruption, except by doorways and openings, so that a hand can move from end to end without interruption.
- 24.5.4 Extensions: Handrails shall extend at least twelve inches (12" = 305mm) beyond the top and bottom of the *ramp* and shall be parallel with the floor or ground surface (see **Fig. 24d**), except where the extension would cause a safety hazard.

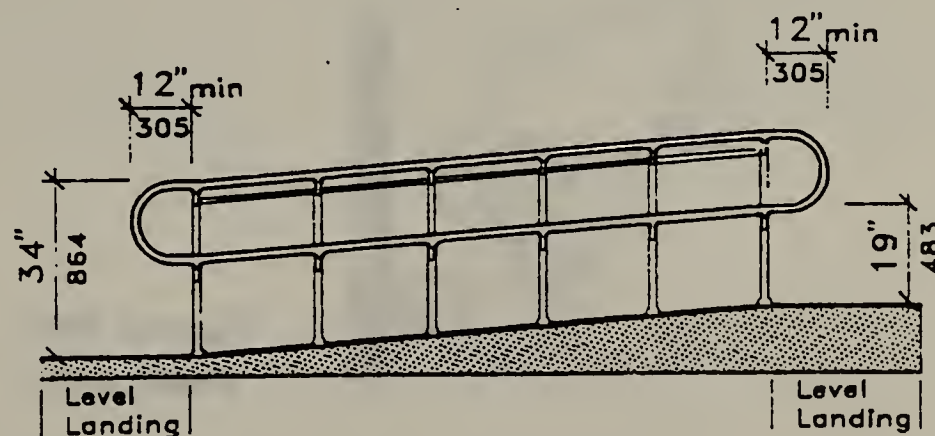


Figure 24d



## Ramps

- 24.5.5 Size: The handgrip portion of the handrail shall not be less than one and one-quarter inches ( $1\frac{1}{4}'' = 32\text{mm}$ ) nor more than one and one-half inches ( $1\frac{1}{2}'' = 38\text{mm}$ ) in outside diameter.
- 24.5.6 Shape: The handgrip portion of the handrail shall be round or oval in cross-section. See Fig. 24e.
- 24.5.7 Surface: The gripping surface shall be free of any sharp or abrasive *elements*.
- 24.5.8 Clearance: When a handrail is mounted adjacent to a wall, the *clear space* between the handrail and the wall shall be one and one-half inches ( $1\frac{1}{2}'' = 38\text{mm}$ ). Handrails may be located in a wall recess if the recess is a maximum of three inches ( $3'' = 76\text{mm}$ ) deep and extends at least eighteen inches ( $18'' = 457\text{mm}$ ) above the top of the rail. See Fig. 24e.
- 24.5.9 End condition: Ends of handrails shall be either rounded or returned smoothly to floor, wall, or post.
- 24.5.10 Handrails shall not rotate within their fittings.

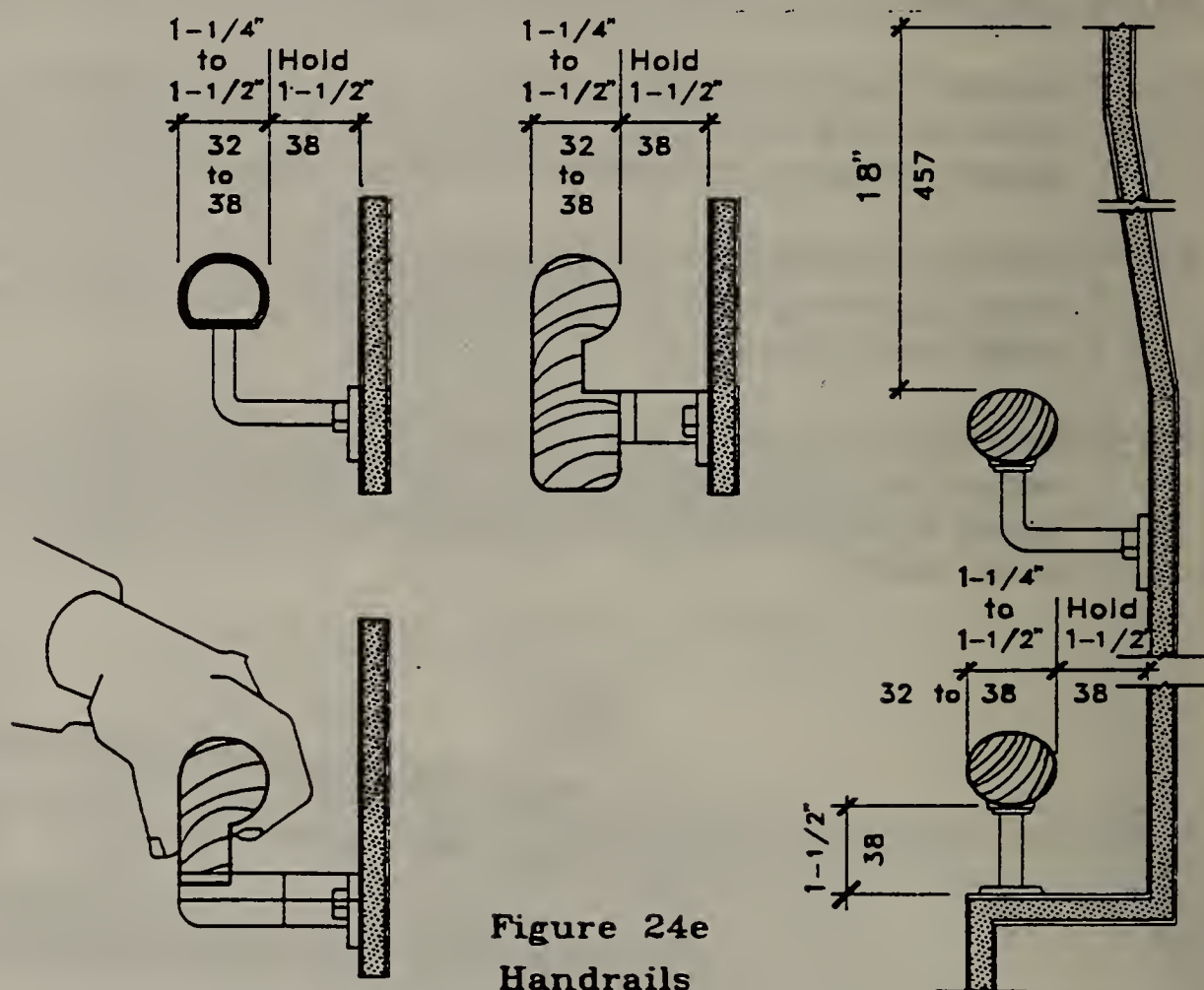


Figure 24e  
Handrails



**Ramps****24.6 CROSS SLOPE**

The *cross slope* of *ramp* surfaces shall be no greater than 1:50 (2%).

**24.7 SURFACES**

*Ramp* surfaces shall be stable, firm, and *slip resistant*. *Ramps* may be carpeted only if carpeting is installed in accordance with **Section 29.3, Carpets**.

**24.8 EDGE PROTECTION**

*Ramps* and landings with drop-offs shall have edge curbs, walls, railings, or projecting surfaces that prevent people from slipping off the *ramp*. Edge curbs shall be a minimum of two inches (2" = 51mm) high. See **Fig. 24f**.

**24.9 OUTDOOR CONDITIONS**

Outdoor *ramps* and their approaches shall be designed so that water will not accumulate on walking surfaces. If gratings are used to disperse water, they shall comply with **Section 22, Walkways**.

**24.10 CIRCULAR RAMPS**

Circular *ramps* are not permitted, except with the approval of this *Board*.

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## Entrances

## 25.1 GENERAL

All public entrance(s) of a building or tenancy in a building shall be accessible. Public entrances are any entrances that are not solely service entrances, loading entrances, or entrances restricted to employee use only.

25.1.1 Service entrances: If the only entrance to a building, or tenancy in a facility, is a service entrance, that entrance shall be accessible.

25.1.2 Exits: At least as many accessible entrances as exits required by the applicable State Building Code or the local fire department codes must be provided.

## 25.2 APPROACH

The approach to an accessible entrance shall be a paved walk or ramp with a slip resistant surface, uninterrupted by steps. Entrance(s) shall have a level space on the interior and exterior of the entrance doors complying with Fig. 25a and 25b.

## 25.3 VESTIBULES

Between any two hinged or pivoted doors, there shall be a minimum of forty-eight inches (48" = 1219mm) plus the width of any door swinging into the space. See Fig. 25a and 25b.

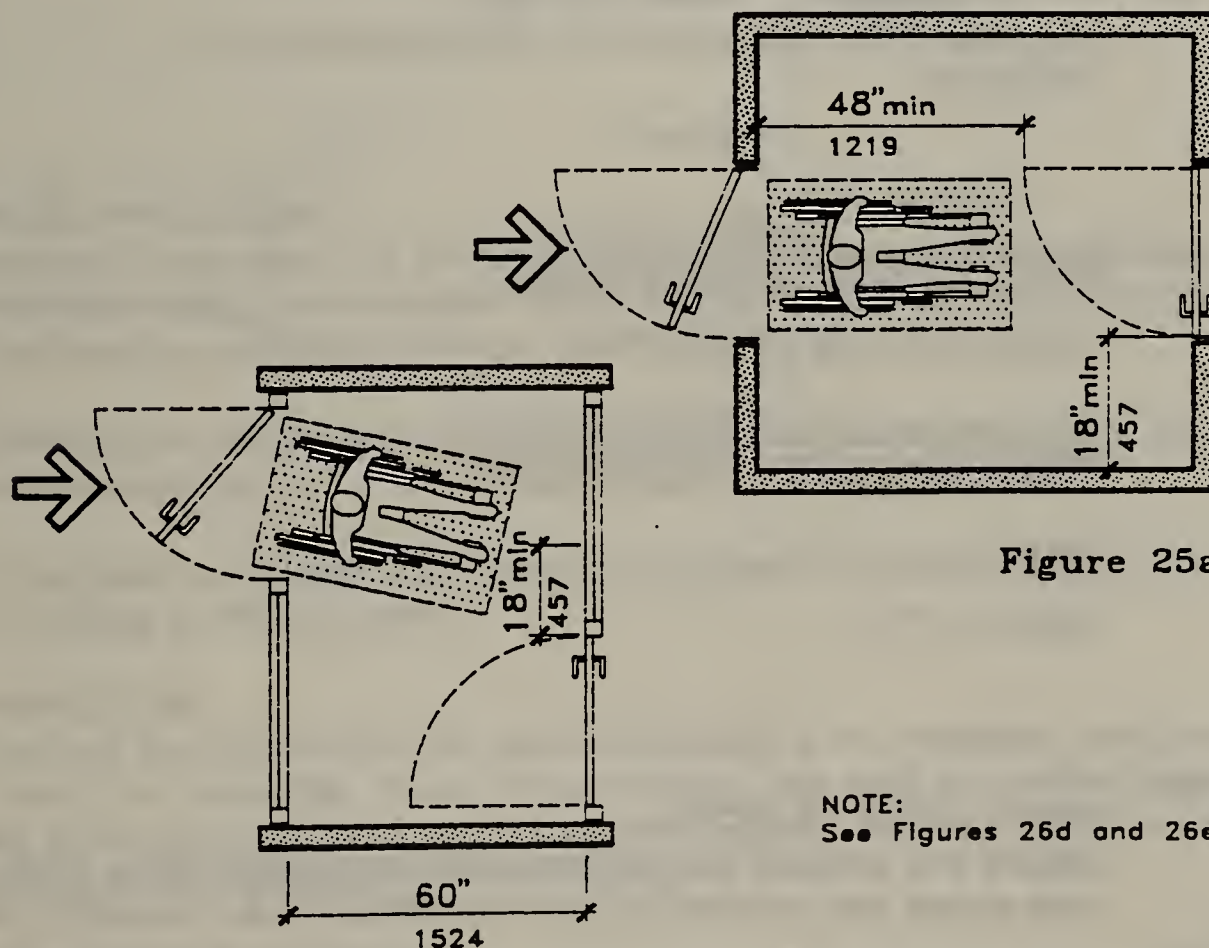


Figure 25a

Figure 25b (Alternate Solution)



## Entrances

### 25.4 MATS AND GRATES

Door mats one-half inch ( $1/2'' = 13\text{mm}$ ) thick or less shall be securely anchored at all edges to avoid tripping. Door mats between one quarter inch ( $1/4'' = 6\text{mm}$ ) and one-half inch ( $1/2'' = 13\text{mm}$ ) thick must be secured with beveled edging that slopes no more than 1:2 (50%). Door mats thicker than one-half inch ( $1/2'' = 13\text{mm}$ ) shall be recessed. Grates shall have openings not exceeding one-half inch ( $1/2'' = 13\text{mm}$ ) in the *path of travel*. See Fig. 25c.

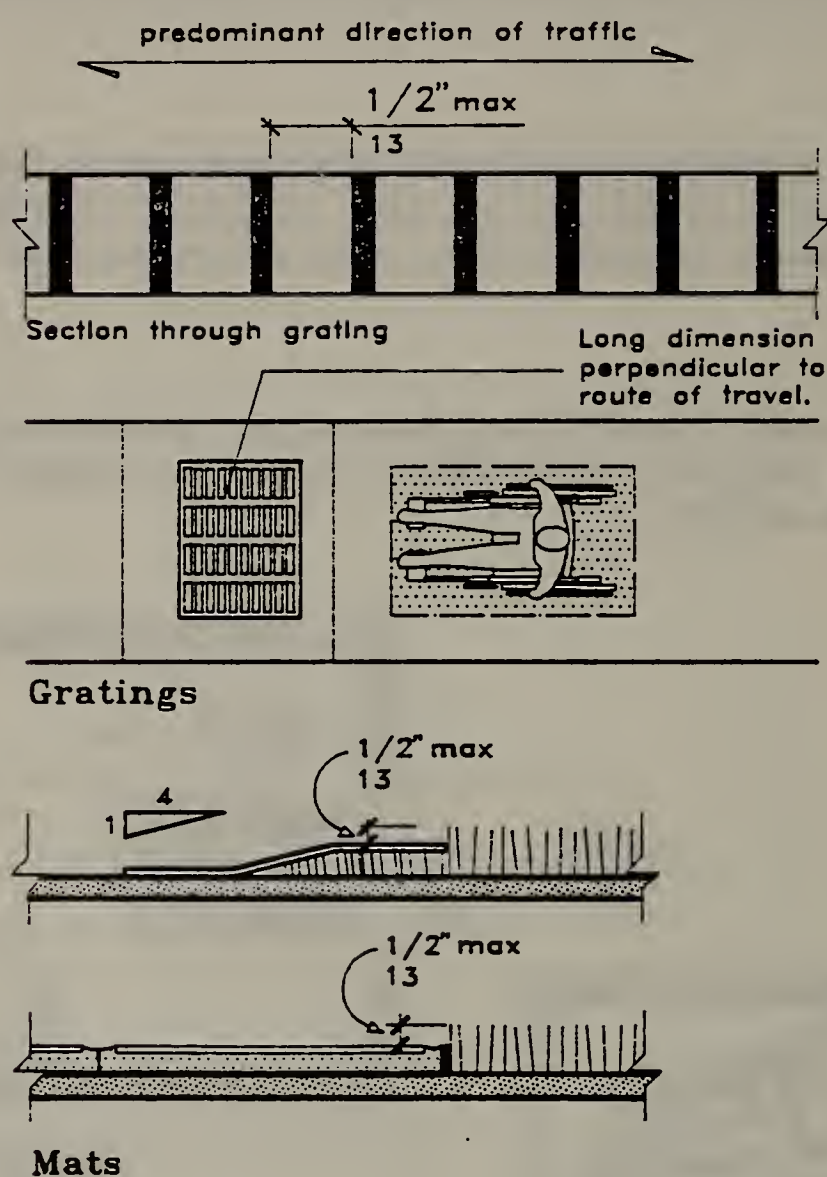


Figure 25c

### 25.5 PROTRUDING OBJECTS

Objects that protrude into entranceways, (suspended lights, signs, fixtures, door closers, etc.) shall comply with Section 20.6, Protruding Objects.

### 25.6 SIGNAGE

Any *entrance/exit* of a *facility* not *accessible* by persons in wheelchairs shall have a sign clearly indicating the location of the *accessible entrance/exit*.

## Doors and Doorways

## 26.1 GENERAL

All doors and openings along *accessible routes* shall comply with the following requirements.

## 26.1.1 Gates, including ticket gates, shall also comply with these requirements.

Exceptions: Openings greater than twenty-four inches (24" = 610mm) in depth are not doorways but may be part of an *accessible routes*, in which case they shall comply with **Section 20, Accessible Routes** and **Section 24, Ramps** (see Fig. 26a). Doors not requiring full user passage, such as shallow closets, may have the minimum *clear* opening reduced to twenty inches (20" = 508mm) minimum, see **Section 9.8.8, Closets**.

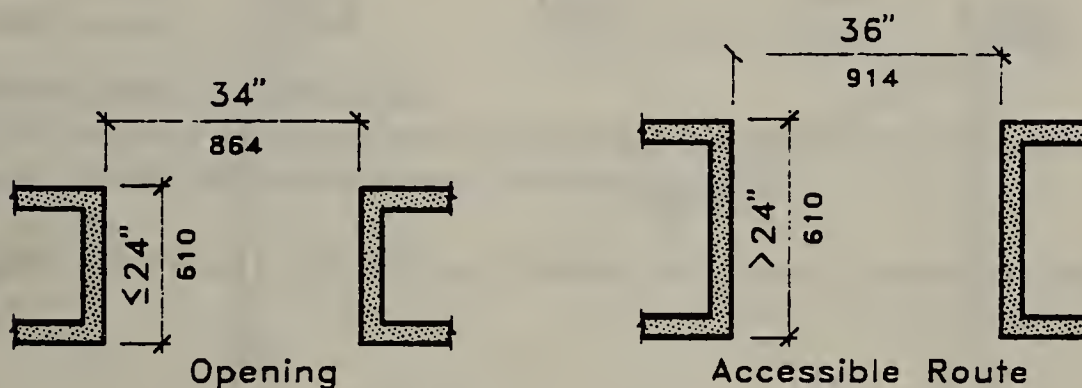


Figure 26a  
Openings and Accessible Routes

## 26.2 REVOLVING DOORS

Revolving doors shall not be the only means of passage at an *accessible entrance* or along an *accessible route*. An *accessible* door shall be provided adjacent to a revolving door and shall permit the same use pattern.

26.2.1 Whenever the revolving doors are unlocked, the adjacent *accessible* door shall be unlocked.26.2.2 The adjacent *accessible* door must have hardware that allows *entrance* into the *building* as well as *egress*.

## 26.3 TURNSTILES

Turnstiles shall not be the only means of passage at an *accessible entrance* or along an *accessible route*. An *accessible* gate shall be provided adjacent to the turnstile and shall be designed to permit the same use pattern, complying with **Sections 26.2.1** and **26.2.2**.

## 26.4 DOUBLE-LEAF DOORWAYS

A doorway having two independently operated door leaves shall have at least one leaf that meets the requirements of **Sections 26.5** and **26.6**. That leaf shall be an active leaf.

**Doors and Doorways****26.5 WIDTH**

All doorways and openings that are required to be *accessible* shall have a *clear* opening of not less than thirty-four inches ( $34'' \pm 3/4'' = 864\text{mm} \pm 19\text{mm}$ ). *Clear* opening of a door is measured from the face of the stop on the latch side to the face of the door when the door is open ninety (90) degrees. For door types such as bifold, accordion, and pocket, the *clear* opening is measured when the door is in its most fully open position. See Fig. 26b and 26c.

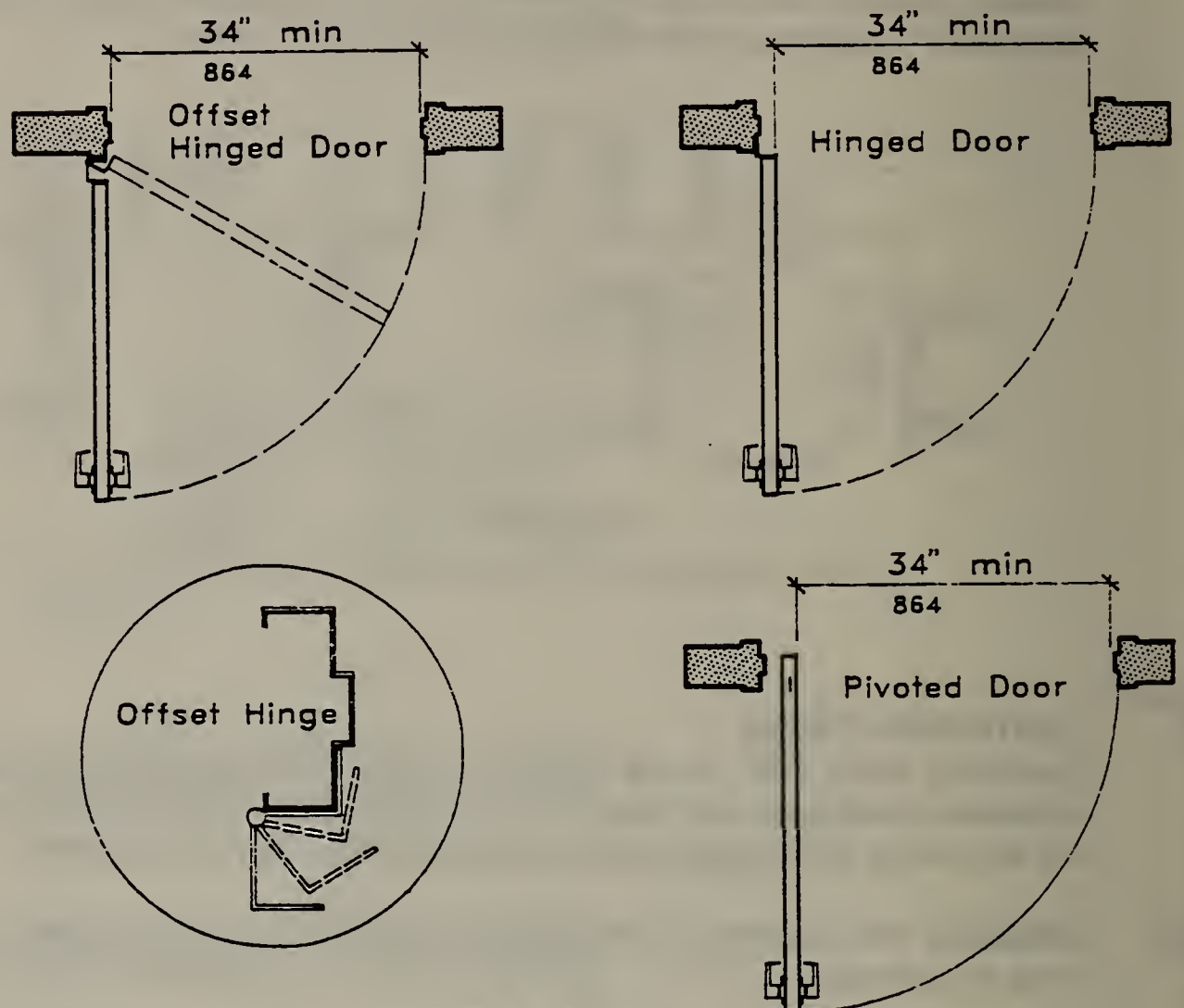


Figure 26b



## Doors and Doorways

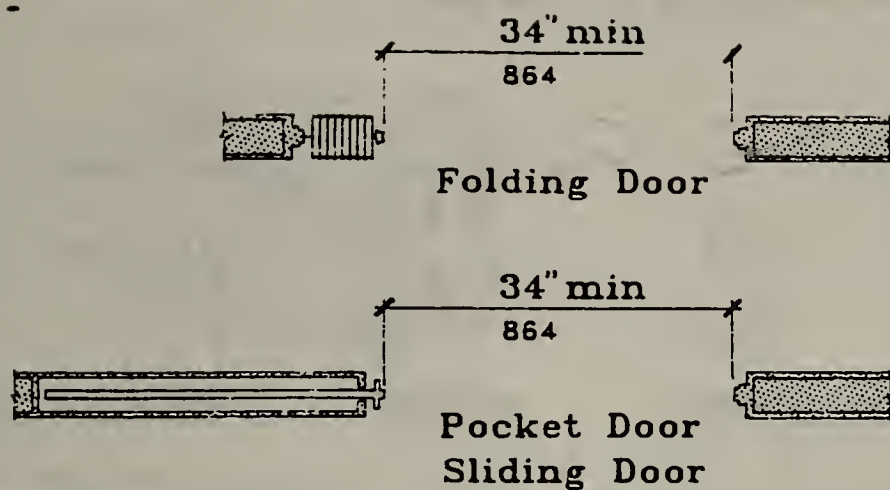


Figure 26c

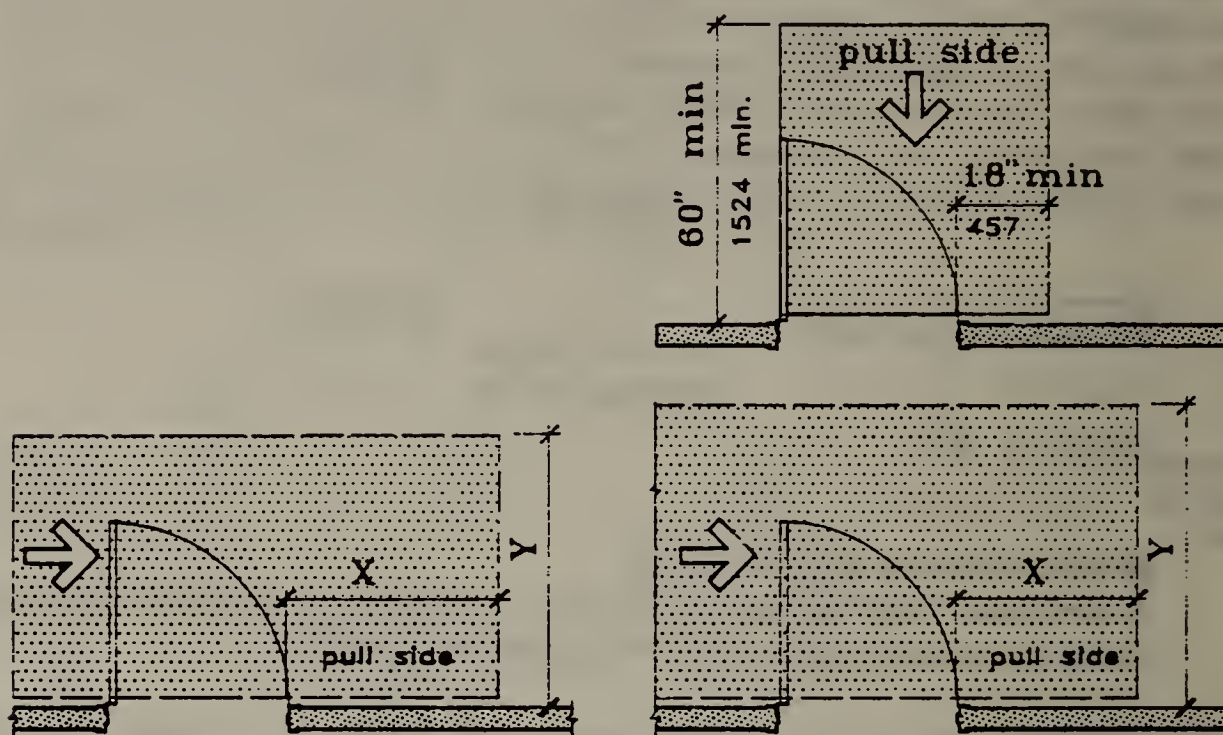
**26.6 MANEUVERING CLEARANCE**

A minimum *clear* floor area shall be provided on both sides of all non-*auto-matic doors* and gates shall comply with the following:

- 26.6.1 General: The floor or ground area within the required clearances shall be *level*.

Doors and Doorways

26.6.2 Pull side clearance shall comply with Fig. 26d.



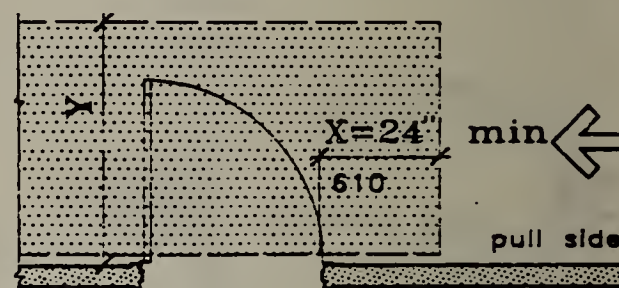
NOTE:  $X=42"$  (1067mm) min.  
If  $Y=54"-59"$  (1372-1499mm)

NOTE:  $X = 36"$  (914 mm) min.  
If  $Y = 60"$  (1524 mm)

Maneuvering Clearance  
At Doors

Pull Side

Figure 26d



NOTE:  $y=54"$  (1372mm) min.,  
if door has closer.

## Doors and Doorways

26.6.3 Push side clearance shall comply with Fig. 26e.

### Maneuvering Clearance At Doors

Push Side

Figure 26e

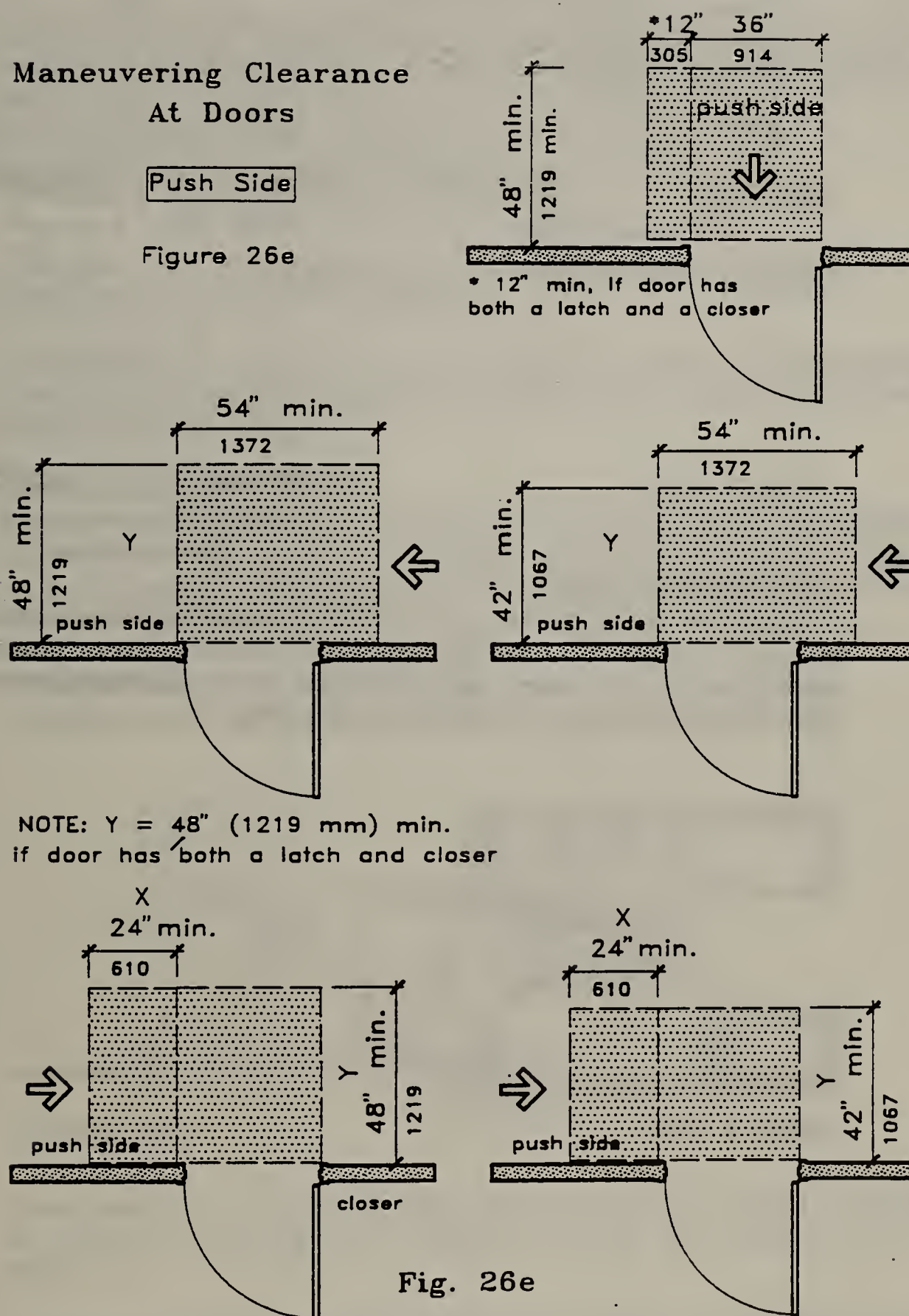


Fig. 26e



## Doors and Doorways

26.6.4 Clearance for sliding door shall comply with Fig. 26f.

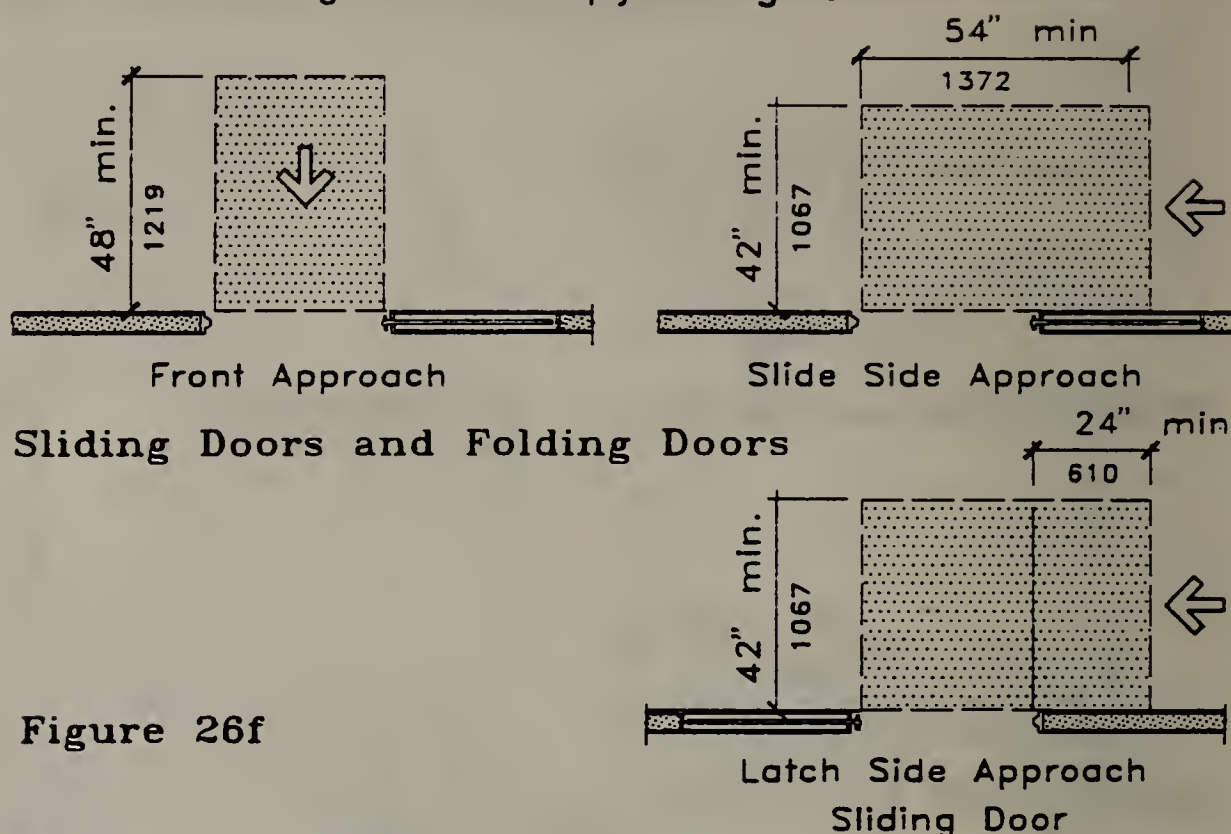


Figure 26f

26.7

**TWO DOORS IN SERIES**

The minimum *space* between two hinged or pivoted doors in series shall be forty-eight inches (48" = 1219mm) plus the width of any door swinging into the *space*. Doors in series shall swing either in the same direction or away from the *space* between the doors. See Fig. 26g.

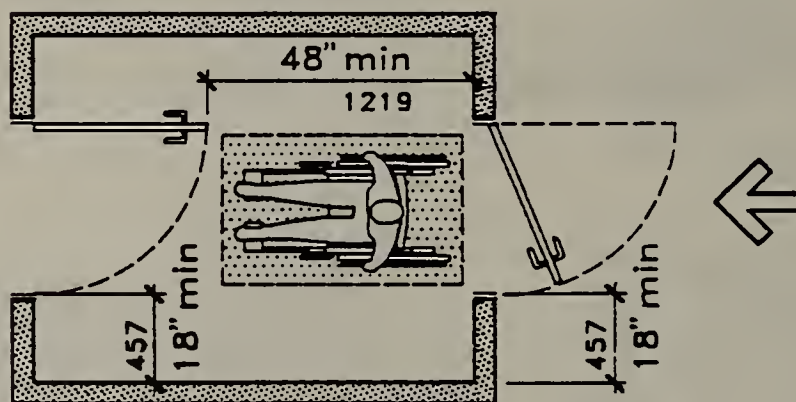


Figure 26g

## Doors and Doorways

### 26.8 DOOR OPENING FORCE

The maximum force for pushing or pulling open a door shall be as follows:

- 26.8.1 Other doors: These forces apply only to opening the door, not to the effort required to retract latch bolts or disengage other devices that may hold the door in a closed position.
- a. exterior hinged doors: 15 ft-lb (66.6N)
  - b. interior hinged doors: 5 ft-lb (22.2N)
  - c. sliding or folding doors: 5 ft-lb (22.2N)

Exception: Fire doors shall have the minimum opening force allowable by the appropriate administrative *authority*.

- 26.8.2 Compensating devices: Doors requiring greater force shall be equipped with compensating devices to reduce the operating force, or shall be equipped with automatic opening devices.

### 26.9 DOOR CLOSERS

If a door has a closer, then the sweep period of the closer shall be adjusted so that from an open position of 70 degrees, the door will take at least 6 seconds to move to a point three inches (3" = 76 mm) from the latch, measured to the leading edge of the door.

### 26.10 THRESHOLDS

Thresholds at doorways shall comply with the following (See Fig. 26h):

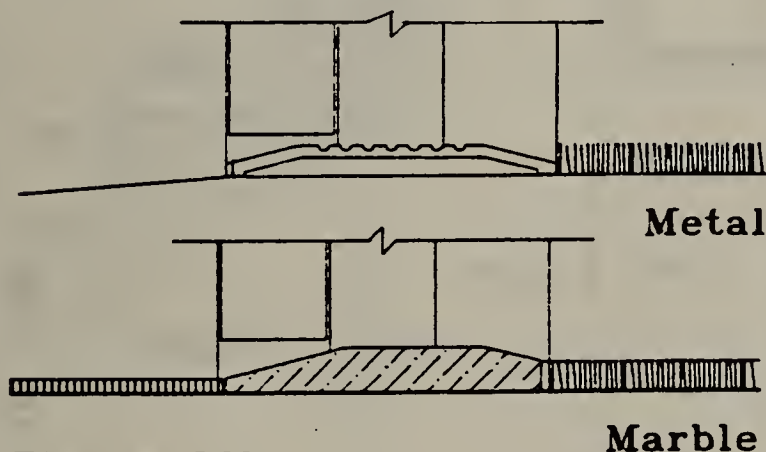


Figure 26h

- 26.10.1 Thresholds shall not exceed one-half inch ( $1/2"$  = 13mm) in height and shall be beveled on both sides with a slope no greater than one-in-four (1:4) (25%).
- 26.10.2 Changes in floor finish materials shall have an edge strip or threshold that is beveled at a ratio of one-in-four (1:4) (25%).
- 26.10.3 Exterior sliding door thresholds shall not exceed three-quarters of an inch ( $3/4"$  = 19mm) in height and shall be beveled both sides with a slope no greater than one-in-four (1:4) (25%).

## Doors and Doorways

### 26.11 DOOR HARDWARE

Shall comply with the following:

- 26.11.1 Type: Handles, pulls, latches, locks, and other operating devices on *accessible* doors shall have a shape that is easy to operate with one hand and that does not require tight grasping, tight pinching, or twisting of the wrist to operate. Lever-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs. When sliding doors are fully open, operating hardware shall be exposed and usable from both sides. See Fig. 26i.
- 26.11.2 Height: Hand-operated door opening hardware shall be located thirty-six inches to forty-eight inches (36" to 48" = 914mm to 1219mm) above the floor.
- 26.11.3 Operation: Doors in the *means of egress* shall be operable with one hand and with a single effort. Doors in the paths of ingress shall be able to be unlocked and opened with one hand. The force required to operate the hardware shall be no greater than 5 ft. lb. (22.2N).
- 26.11.4 Special hardware: Doors opening into hazardous areas shall have door-opening hardware which is knurled or has a roughened surface to give *tactile warning* to persons with visual impairments. Hazardous areas shall include but not be limited to loading platforms, boiler rooms, and electrical equipment rooms.

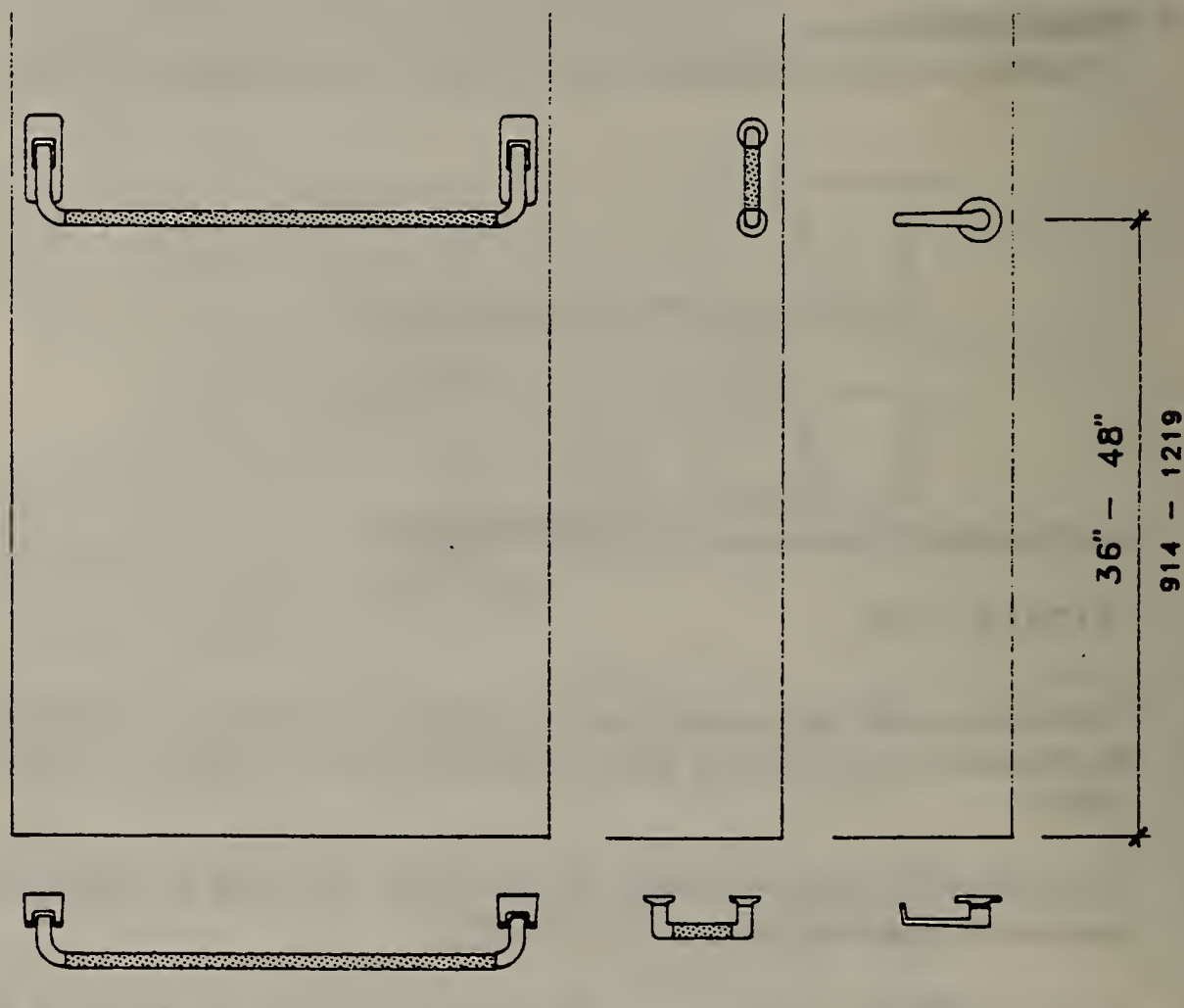


Figure 26i



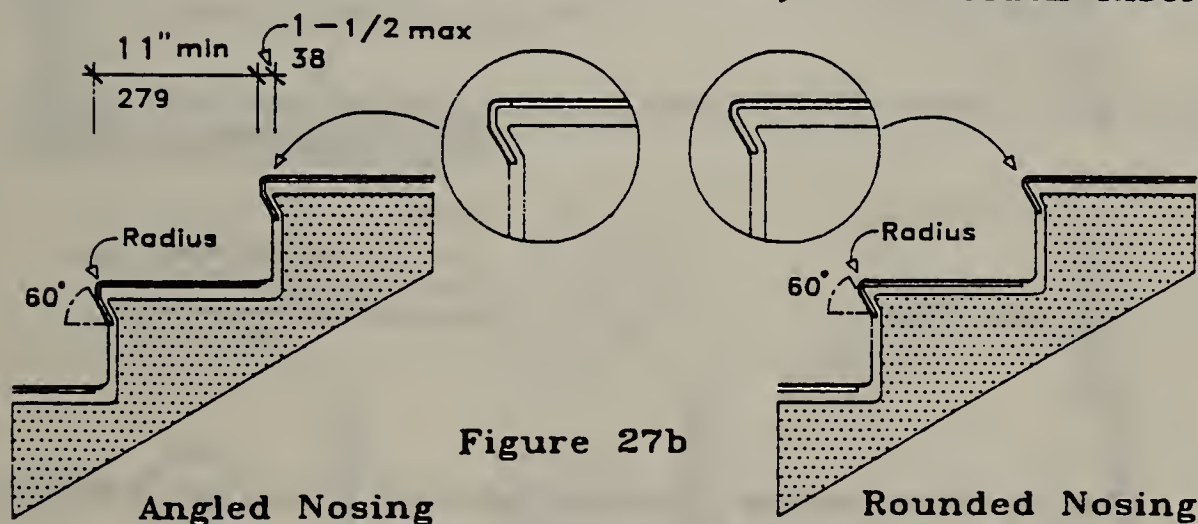
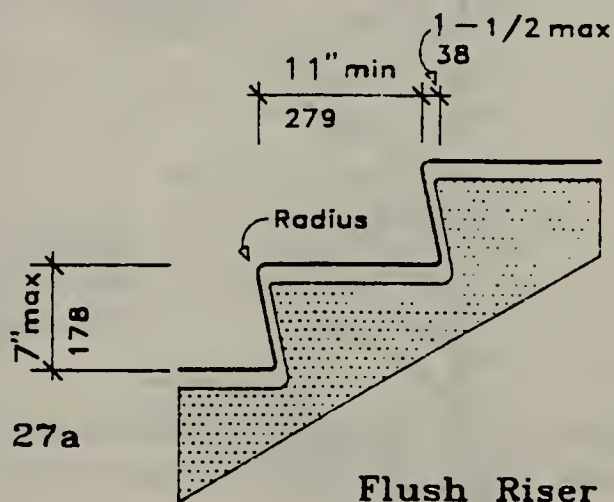
## Stairs

## 27.1 GENERAL

- Stairs required as a *means of egress* shall comply with the following requirements:

## 27.2 TREADS AND RISERS

On any given flight of stairs, all steps shall have uniform riser heights and uniform tread widths. Stair treads shall be no less than eleven inches (11" = 279mm) wide, measured from riser to riser (See Fig. 27a). Open risers are not permitted. There is no tolerance allowance.



## 27.3 NOSINGS

The undersides of nosings shall not be abrupt. Nosings shall project no more than one and one-half inches (1-1/2" = 38mm). The radius of curvature at the leading edge of the tread shall be no greater than one-half inch (1/2" = 13mm). Risers shall be sloped or the underside of the nosing shall have an angle not less than sixty (60) degrees from the horizontal. See Fig. 27b.

## Stairs

## 27.4 HANDRAILS

Handrails shall have the following features:

- 27.4.1 Location: Stairways shall have continuous handrails at both sides of all stairs. The inside handrail on switchback or dogleg stairs shall always be continuous. See Fig. 27c.

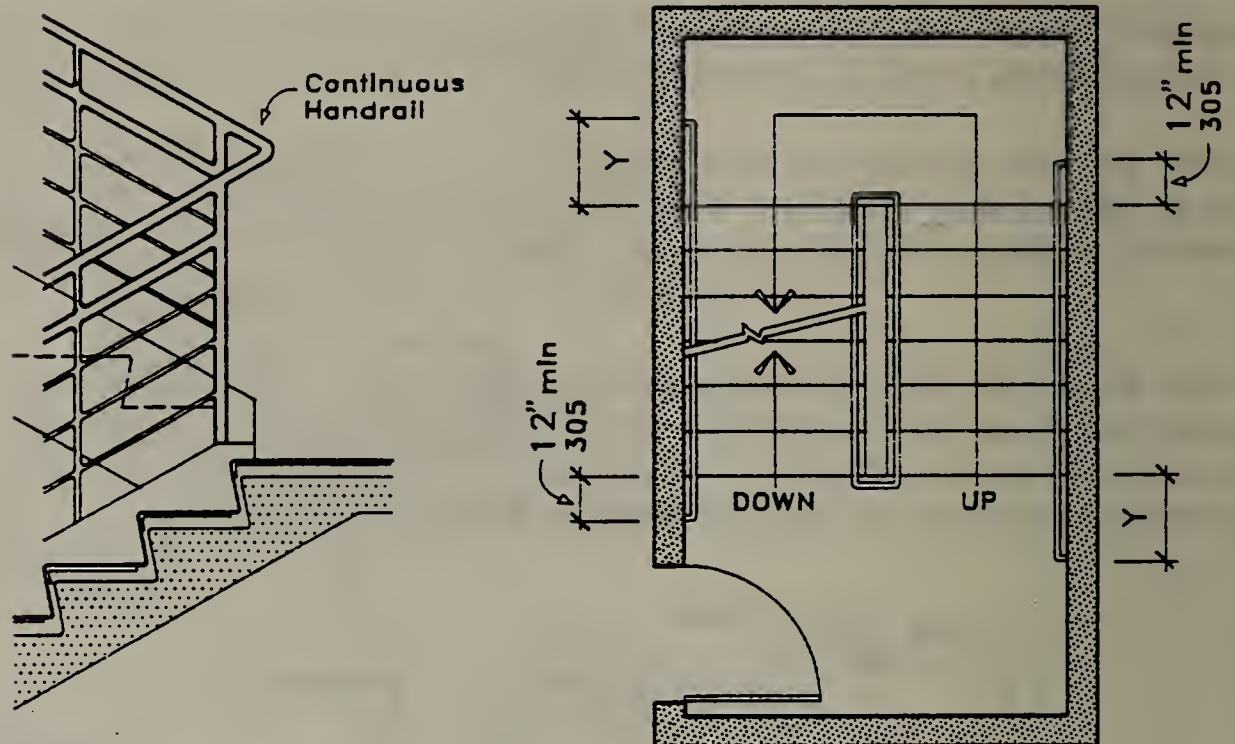


Figure 27c

## NOTE:

$Y = 12'' \text{ min. (305mm)}$  plus the width of one tread beyond the bottom riser

- 27.4.2 Height: Top of handrail gripping surface shall be mounted at thirty-four inches ( $34'' = 864\text{mm}$ ) above stair nosings.
- 27.4.3 Extensions: Where handrails terminate at the top and bottom of a stair run, they shall have extensions that comply with the following:
- At the top, extend at least twelve inches ( $12'' = 305\text{mm}$ ) beyond the top riser and parallel with the floor or ground surface. See Fig. 27d.
  - At the bottom, extend at least twelve inches ( $12'' = 305\text{mm}$ ) plus the width of one tread beyond the bottom riser. The handrail shall continue to slope for a distance of the width of one tread from the bottom riser; the remainder of the extension shall be horizontal. See Fig. 27e.
  - Handrail extensions need not extend if it would cause a safety hazard or if space does not permit. Extensions shall comply with 20.6, Protruding Objects.



## Stairs

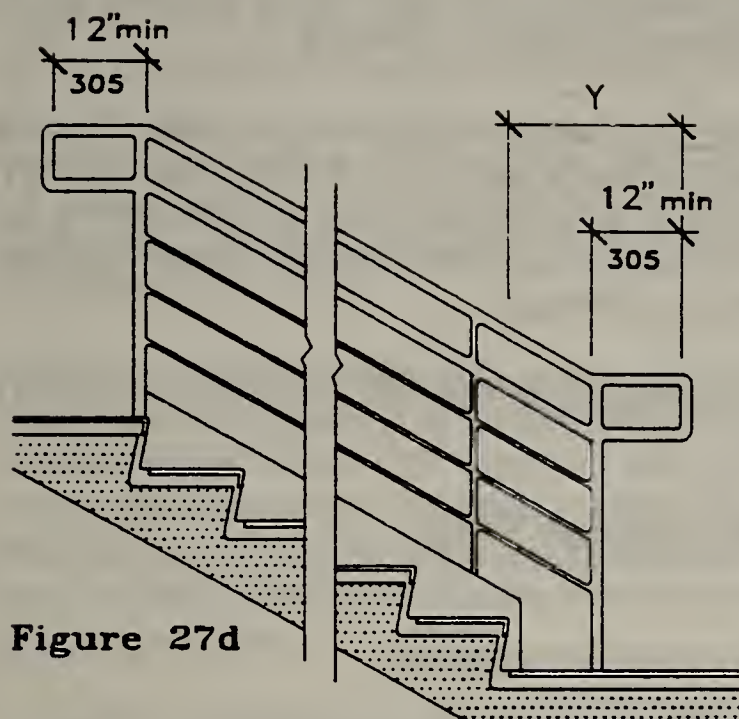


Figure 27d

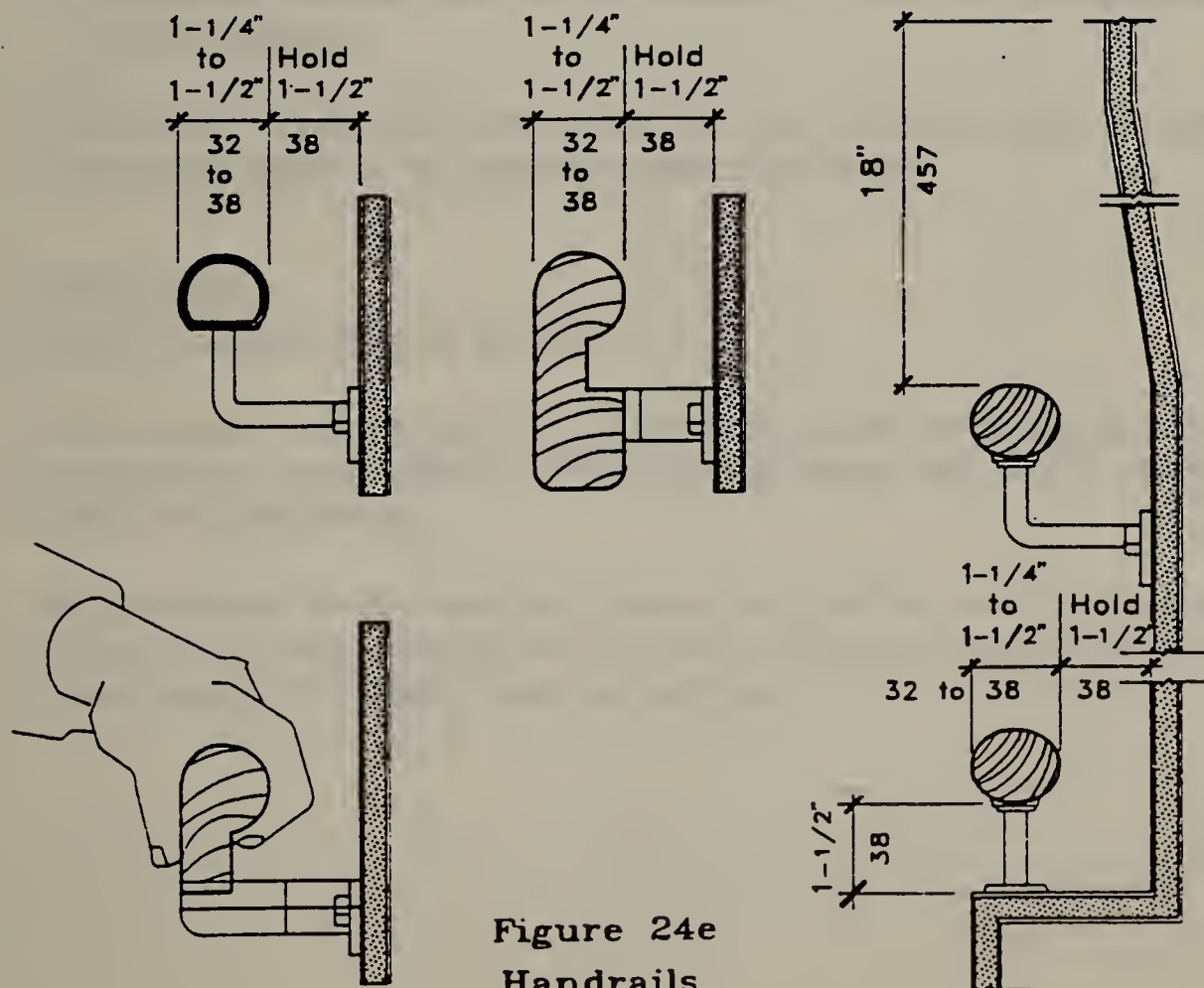
Figure 27e

NOTE:

$Y = 12'' \text{ min. (305mm) plus the width of one tread beyond the bottom riser}$

27.4.4 Size: The handgrip portion of the handrail shall not be less than one and one-quarter inches ( $1\frac{1}{4}'' = 32\text{mm}$ ) nor more than one and one-half inches ( $1\frac{1}{2}'' = 38\text{mm}$ ) in outside diameter.

27.4.5 Shape: The handgrip portion of the handrail shall be round or oval in cross-section. See Fig. 24e.

Figure 24e  
Handrails



**Stairs**

- 27.4.6 Surface: The gripping surface shall be continuous so that a hand can move from end to end without interruption by newel posts or other obstructions, and shall be free of any sharp or abrasive *elements*.
- 27.4.7 Clearance: When a handrail is mounted adjacent to a wall, the *clear* space between the handrail and the wall shall be one and one half inches (1-1/2" = 38mm). Handrails may be located in a wall recess if the recess is a maximum of three inches (3" = 76mm) deep and extends at least eighteen inches (18" = 457mm) above the top of the rail.
- 27.4.8 End condition: Ends of handrails shall be either rounded or returned smoothly to floor, wall, or post.
- 27.4.9 Handrails shall not rotate within their fittings.

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**27.5**

**STAIR SURFACE**

Stair treads shall have a *slip resistant* surface.

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**27.6**

**DETECTABLE WARNINGS AT STAIRS (RESERVED).**

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**27.7**

**OUTDOOR CONDITIONS**

Outdoor stairs and their approaches shall be designed so that water will not accumulate on walking surfaces.

**Elevators****28.1 GENERAL**

- In all multi-story buildings and facilities, each level including mezzanines, shall be served by a passenger elevator. If more than one elevator is provided, each passenger elevator shall comply with this Section.

28.1.1 Accessible elevators shall be on an accessible route and shall comply with the ASME A17.1-1990, Safety Code for Elevators and Escalators and, if applicable, with the regulations of the Massachusetts Board of Elevator Regulations, 524 CMR.

28.1.2 Exemptions: The elevator exemptions set forth below do not obviate or limit in any way the obligation to comply with the other accessibility requirements of these Regulations. For example, floors above or below the accessible ground floor must meet the requirements of these Regulations except for elevator service. If toilet or bathing facilities are provided on a level not served by an elevator, then toilet or bathing facilities must be provided on the accessible ground floor.

- a. Buildings having only two (2) levels may provide an interior accessible ramp complying with **Section 24, Ramps** in lieu of an elevator.
- b. Buildings having only two levels, in which each level serves an unrelated use and in which there is no internal stair, do not require an elevator if each level is accessible.
- c. Freight elevators shall not be required to meet the requirements of this Section unless the only elevators provided are used as combination passenger and freight elevators for the public and employees.
- d. Elevator pits, elevator penthouses, mechanical rooms, and piping or equipment catwalks shall not be required to meet the requirements for elevator access.

28.1.3 A passenger elevator that provides service from a garage to only one level of a building or facility is not required to serve other levels.

**28.2 OPERATION**

Elevator operation shall be automatic.

28.2.1 Self Leveling: Each car shall be equipped with a self-leveling feature that is automatic and independent of the operating device and shall correct any overtravel or undertravel.

28.2.2 The self-leveling feature shall bring the car to a position level with floor landings under all loading conditions from zero to the rated limit. A tolerance of one-half inch ( $1/2'' = 13\text{mm}$ ) shall be permitted.



## Elevators

**28.3 HALL CALL BUTTONS**

Shall comply with the following:

- 28.3.1 Call buttons in elevator lobbies and halls shall be centered at forty-two inches (42" = 1067mm) above the floor. See Fig. 28a.
- 28.3.2 Such call buttons shall have visual signals to indicate when each call is registered and when each call is answered.
- 28.3.3 Call buttons shall be a minimum of three-quarters of an inch ( $3/4"$  = 19mm) in the smallest dimension. The button designating the up direction shall be on top. Buttons shall be raised or flush.
- 28.3.4 Objects mounted beneath hall call buttons shall not project into the elevator lobby more than four inches (4" = 102mm).

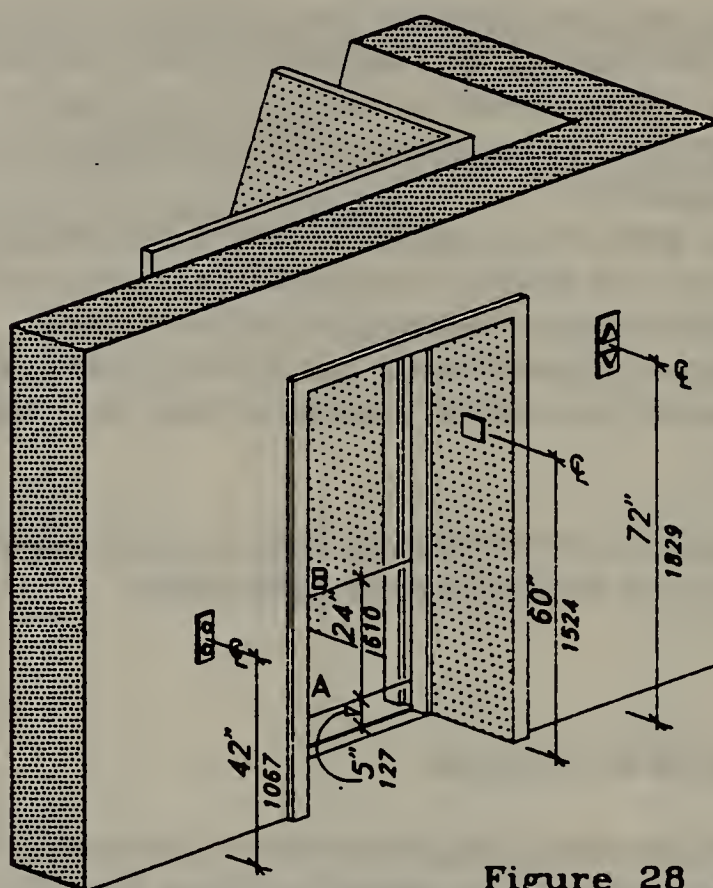


Figure 28 a

Note: The automatic door reopening device is activated if an object passes through either line A or line B. Line A and line B represent the vertical locations of the door reopening device not requiring contact.



**Elevators****28.4 HALL LANTERNS**

A visible and audible signal shall be provided at each hoistway *entrance* to indicate which car is answering a call. Lanterns shall comply with the following:

- 28.4.1 Hall lantern fixtures shall be mounted so that their centerline is at least seventy-two inches (72" = 1829mm) above the lobby floor. **See Fig. 28a.**
- 28.4.2 Audible signals shall sound once for the up direction and twice for the down direction or shall have verbal annunciators that say "up" and "down."
- 28.4.3 Visible signals shall have the following features:
  - a. Visual *elements* shall be at least two and one-half inches (2-1/2" = 64mm) in the smallest dimension.
  - b. Signals shall be visible from the vicinity of the hall call button. **See Fig. 28a.** In-car lanterns located in cars, visible from the vicinity of hall call buttons, and conforming to the above requirements, shall be acceptable.

**28.5 DOOR JAMB MARKINGS**

Both jambs of all elevator hoistway *entrances* shall have raised and Braille floor designation jambs that are visible from within the car and the elevator lobby.

- 28.5.1 The centerline of the characters shall be sixty inches (60" = 1524mm) above finish floor. **See Fig. 28a.**
- 28.5.2 Such characters shall be on a contrasting color background, two inches (2" = 51mm) high and shall comply with **Section 39.5, Operation.**
- 28.5.3 Permanently applied plates are acceptable if they are secured to the jambs.

**28.6 DOORS**

Elevator doors shall open and close automatically and shall comply with the following:

- 28.6.1 Width: In new *construction or reconstruction of buildings*, elevator doors shall provide a *clear* opening that is at least thirty-six inches (36" = 914mm) wide. In *alterations of buildings*, elevator doors shall provide a *clear* opening that is at least thirty-two inches (32" = 813mm) wide .
- 28.6.2 Closing Speed: Doors shall close at a maximum speed of approximately one foot (1' = 305mm) per second.
- 28.6.3 Reopening Device: A door reopening device shall be provided that will stop and reopen a car door and an adjacent hoistway door automatically if the car door becomes obstructed by an object or person while closing.

Elevators

- a. The device shall be capable of completing these operations without requiring contact with the obstruction.
- b. The reopening device shall detect possible obstructions passing through the opening at heights of five inches and of twenty-nine inches (5" = 128mm and 29" = 737mm) above finish floor. See Fig. 28a.
- c. Door reopening devices shall remain effective for at least twenty (20) seconds. After such an interval, doors may close in accordance with the requirements of ASME A17.1-1990 and, if applicable, with the regulations of the Massachusetts Board of Elevator Regulations, 524 CMR.

28.6.4 Door and Signal Timing for Hall Calls

Doors and signals shall be coordinated to comply with the following:

- a. The minimum acceptable time from notification that a car is answering a call until the doors of that car start to close shall be calculated from the following equation:

$$T = D / (1.5 \text{ ft/s})$$

or

$$T = D / (447 \text{ mm/s})$$

T = total time in seconds

D = distance (in feet or millimeters) from a point in the lobby or corridor sixty inches (60" = 1524mm) directly in front of the farthest call button controlling that car to the centerline of its hoistway door. See Fig. 28b.

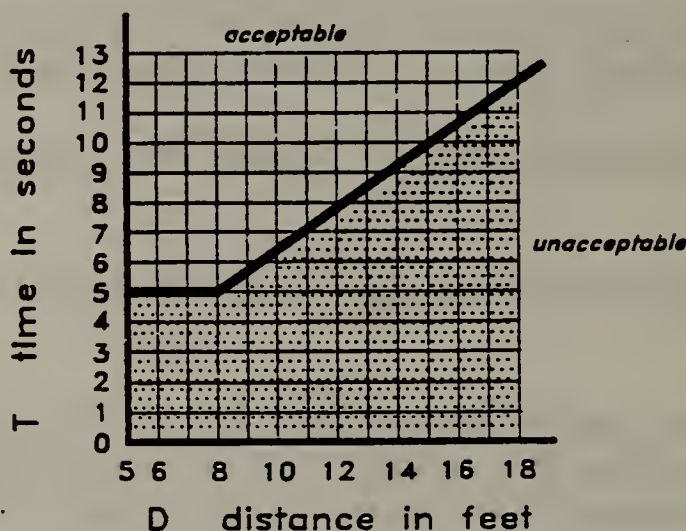


Figure 28b  
Graph of Timing Equation

For cars with in-car lanterns, "T " begins when the lantern is visible from the vicinity of hall call buttons and an audible signal is sounded.

- b. The minimum acceptable notification time shall be five (5) seconds.



## Elevators

- 28.6.5 Door Delay for Car Calls: The minimum time for elevator doors to remain fully open in response to a car call shall be three (3) seconds.

## 28.7 ELEVATOR CAR

The floor area of elevator cars shall provide space for wheelchair users to enter the car, maneuver within reach of controls, and exit from the car. See Fig. 28c.

- 28.7.1 Dimensions: Acceptable door opening and inside dimensions shall be as shown in Fig. 28c.

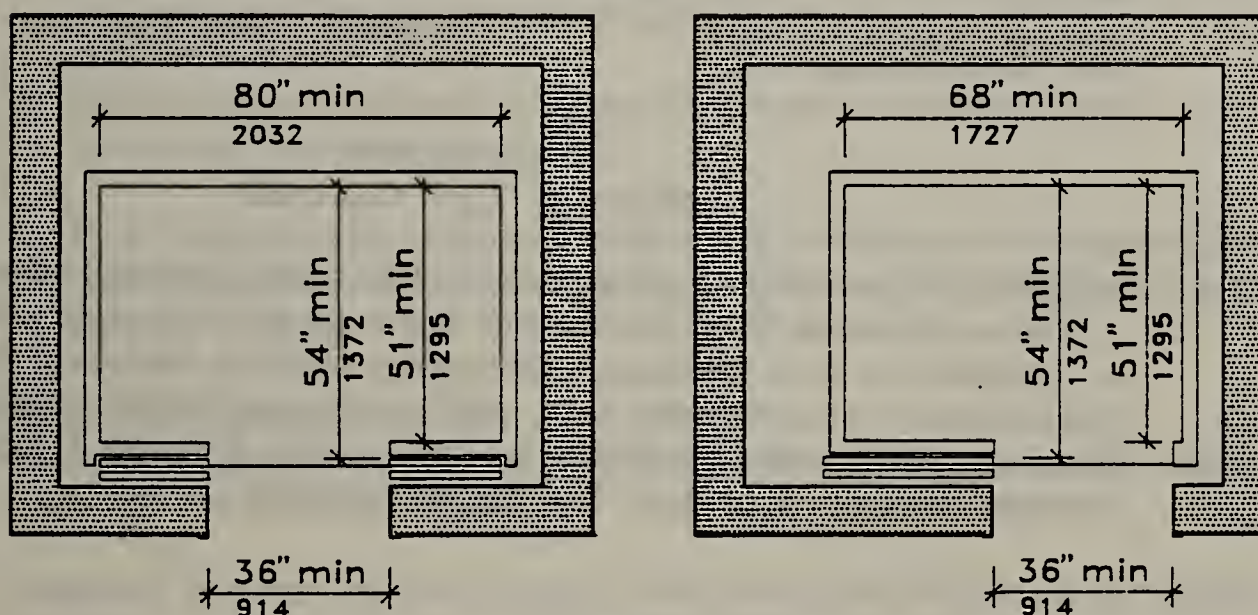


Figure 28c  
Minimum Dimensions of Elevator Cars

- 28.7.2 Hoistway Clearance: The horizontal clearance between the car platform sill and the edge of any hoistway landing shall be no greater than one and one-quarter inch ( $1\frac{1}{4}'' = 32\text{mm}$ ).
- 28.7.3 Handrails shall be located on at least one wall in every elevator between thirty-two and thirty-six inches ( $32''$  and  $36'' = 813\text{mm}$  and  $914\text{mm}$ ) above the car floor, with a one and one-half inch ( $1\frac{1}{2}'' = 38\text{mm}$ ) clearance from the wall.
- 28.7.4 Floor surface: Floor surfaces shall comply with Section 29, Floor Surfaces.

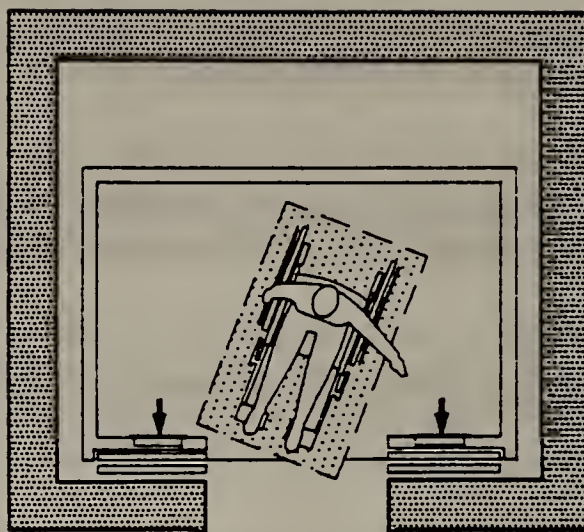
## 28.8 CAR CONTROLS

Elevator control panels shall have the following features:

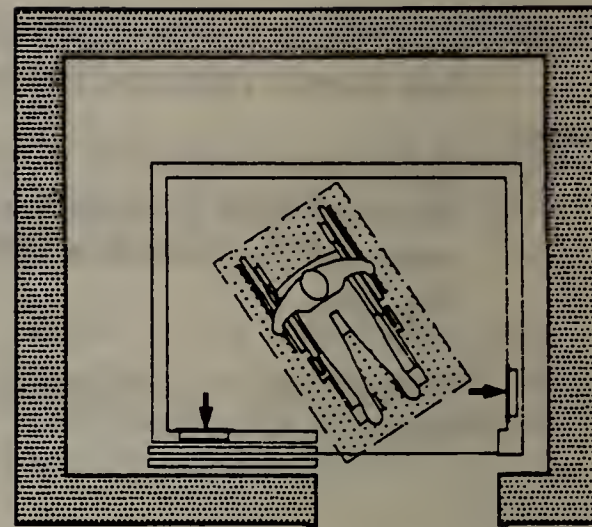
- 28.8.1 Location: If cars have center opening doors, controls shall be located on a front wall. If cars have side opening doors, controls shall be located at the side wall or at the front wall next to the door. See Fig. 28d.



## Elevators



Alternate Locations of Panel  
with Center Opening Door.



Alternate Locations of Panel  
with Side Opening Door.

Figure 28d  
Elevator Car Controls

- 28.8.2 Height: All floor buttons shall be no higher than fifty-four inches (54" = 1372mm) above the finish floor for side approach and forty-eight inches (48" = 1219mm) for front approach. Emergency controls, including the emergency alarm and emergency stop, shall be grouped at the bottom of the panel and shall have their centerlines no less than thirty-five inches (35" = 889mm) above the finish floor. See Fig. 28e and 28f.

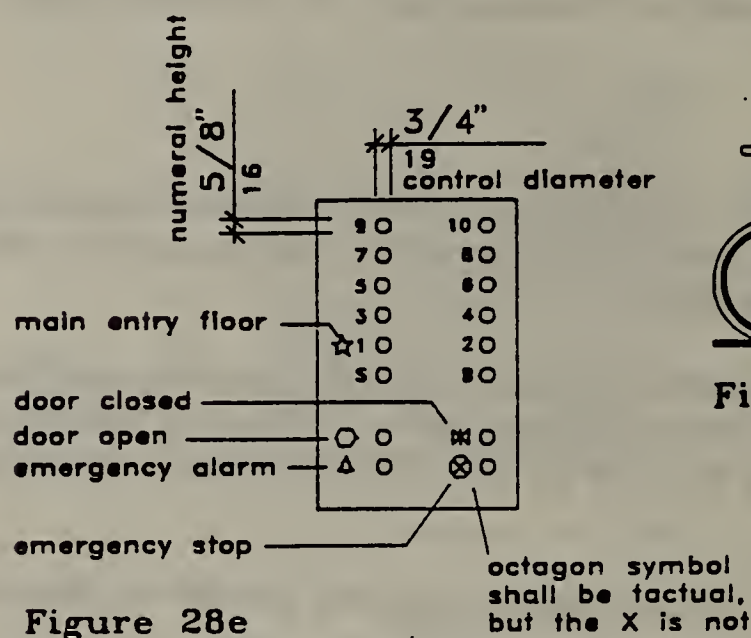


Figure 28e

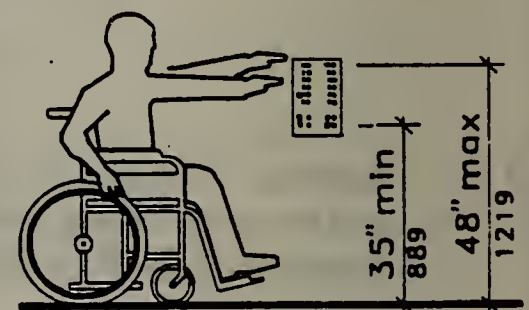


Figure 28f

- 28.8.3 Buttons: All control buttons shall be at least three-quarters of an inch (3/4" = 19mm) in their smallest dimension. They shall be raised or flush.

**Elevators**

28.8.4 **Tactile, Braille, and Visual Control Indicators:** All control buttons shall be designated by Braille and by raised standard alphabet characters for letters, arabic characters for numerals, or standard symbols as shown in Fig. 28f, and as required in ASME A17.1-1990.

- a. Raised and Braille characters and symbols shall comply with **Section 41, Signage**.
- b. The call button for the main entry floor shall be designated by a raised star at the left side of the floor designation. See Fig. 28a.
- c. All raised designations for control buttons shall be placed immediately to the left of the button to which they apply.
- d. Applied plates, permanently attached, are an acceptable means to provide raised control designations.
- e. Floor buttons shall be provided with visual indicators to show when each call is registered. The visual indicators shall be extinguished when each call is answered.

---

28.9 **CAR POSITION INDICATORS**

In elevator cars, a visual car position indicator shall be provided in compliance with the following:

28.9.1 **Location:** The car position indicator shall be located above the car control panel or over the door to show the position of the elevator in the hoistway.

28.9.2 **Visual and Audible:** As the car passes or stops at a floor served by the elevators, the corresponding numerals shall illuminate and an audible signal shall sound.

- a. Numerals shall be a minimum of one-half inch ( $1/2'' = 13\text{mm}$ ) high and shall be illuminated on a contrasting background.
- b. The audible signal shall be no less than 20 decibels with a frequency no higher than 1500 Hz.
- c. An automatic verbal announcement of the floor number at which a car stops or which a car passes may be substituted for the audible signal.

---

28.10 **EMERGENCY COMMUNICATIONS**

Where a service location is maintained in a *building*, a two-way emergency communication system shall be provided between the elevator car and a point outside the hoistway. It shall comply with ASME A17.1-1990.

28.10.1 The highest *operable part* of a two-way communication system shall be a maximum of forty-eight inches ( $48'' = 1219\text{mm}$ ) from the floor of the car.



**Elevators**

- 28.10.2 It shall be identified by a raised symbol and lettering complying with **Section 41, Signage**, and located adjacent to the device.
- 28.10.3 The emergency intercommunication system shall not require voice communication. Lights that indicate that emergency contact has been made and is being responded to would meet this requirement.
- 28.10.4 If the system uses a handset, the length of the cord from the panel to the handset shall be at least twenty-nine inches (29" = 737mm).
- 28.10.5 If the system is located in a closed compartment the compartment door hardware shall conform to **Section 39, Controls**.

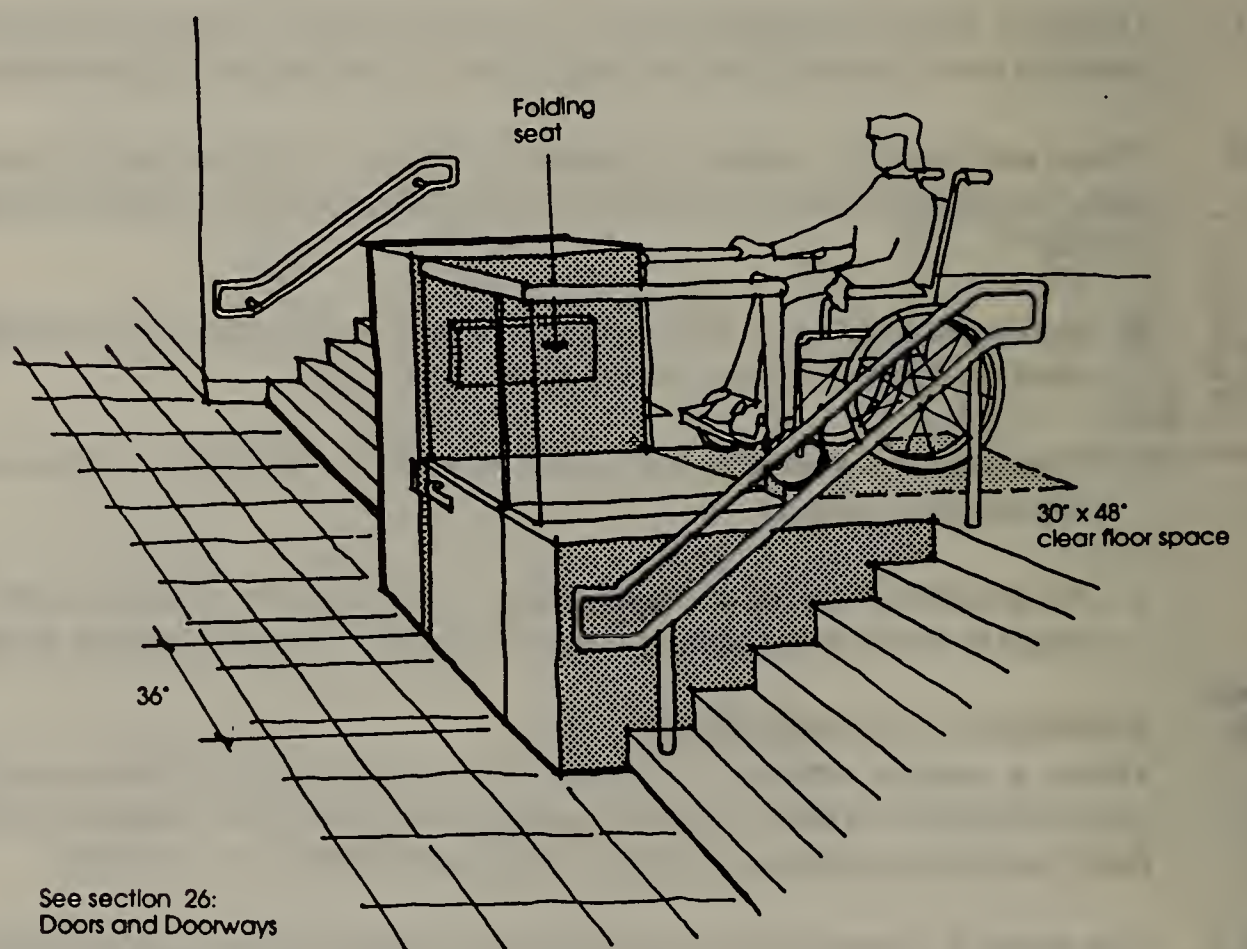
**28.11 ILLUMINATION LEVELS**

The level of illumination at the car controls, platform, car threshold and landing sill shall be at least 5 footcandles (53.8 lux).

**28.12 PLATFORM LIFTS (WHEELCHAIR LIFTS)**

Platform lift devices, when permitted, shall comply with the following:

- 28.12.1 General: Lift devices such as vertical and inclined lifts may be used as a part of an *accessible route* of travel in lieu of an elevator only under the following circumstances. (See Fig. 28g and 28h):





**Elevators**

- a. To provide and *accessible route* to a performing area in an assembly occupancy.
- b. To comply with the wheelchair viewing position line-of-sight and dispersion requirements of **Section 14.4.1**.

28.12.2 If platform lifts (wheelchair lifts) are used, they shall comply with:

- a. **Section 24.4, Landings, Section 29, Floor Surfaces, and Section 39, Controls** of these Regulations;
- b. ASME A17.1 Safety Code for Elevators and Escalators, Section XX, 1990
- c. The Regulations of the Massachusetts Board of Elevator regulations.

28.12.3 If platform lifts are used at *building entrances*, they shall facilitate unassisted entry, operation, and exit from the lift.

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## Floor Surfaces

## 29.1 GENERAL

Ground and floor surfaces including floors, *walks*, *ramps*, and *curb cuts* shall be stable, firm, *slip resistant*, and maintained with materials that ensure continued *slip resistance*.

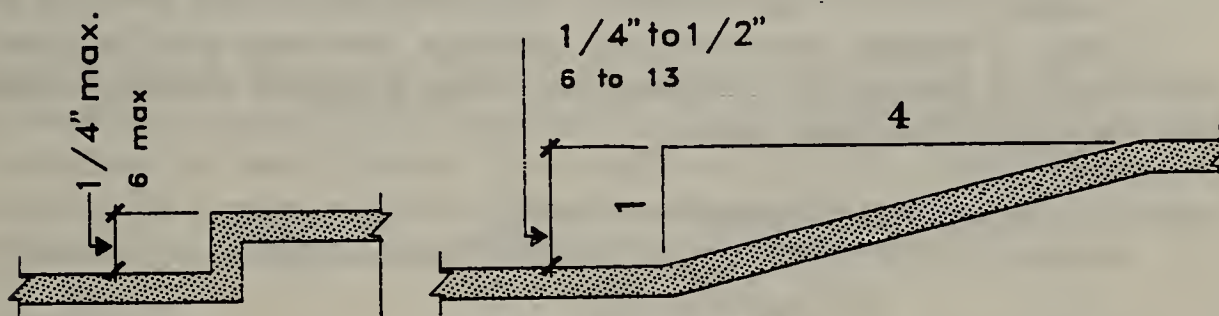
## 29.2 LEVEL CHANGES

Ground and floor surfaces shall be of a common *level* throughout, except for the following permitted changes in *level*.

29.2.1 Changes in *level* up to and including one-quarter inch ( $1/4" = 6\text{mm}$ ) may be vertical and without edge treatment. See Fig. 22a.

29.2.2 Changes in *level* greater than one-quarter inch ( $1/4" = 6\text{mm}$ ) and less than one-half inch ( $1/2" = 13\text{mm}$ ) shall be beveled with a slope no greater than 1:4. See Fig. 29b.

29.2.3 Changes in *level* greater than one-half inches ( $1/2" = 13\text{mm}$ ) are not allowed unless a *ramp*, *walkway*, or means of vertical access complying with these Regulations is provided.



Changes in Level  
Figure 22a



## Floor Surfaces

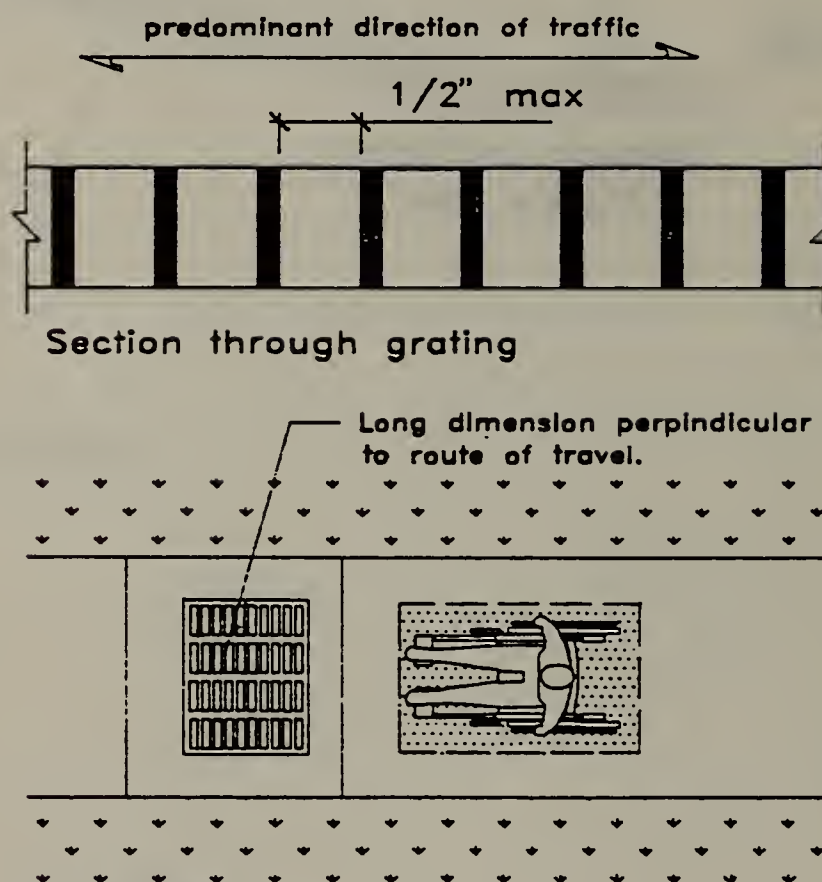
### 29.3 CARPET

When carpet or carpet tile is used on a ground or floor surface, it shall comply with the following:

- 29.3.1 Material: Carpet material shall be high density, non-absorbent, and the maximum pile thickness shall be one-half inch ( $1/2" = 13\text{mm}$ ).
- 29.3.2 Installation: Carpet shall be adhered directly to the floor or shall be stretched tautly and securely fastened to floor surfaces at all edges.
- 29.3.3 Exposed edges: Edges of carpet exposed to traffic shall have trim along the entire length of the exposed edge. Edges perpendicular to the *path of travel* shall have edging strips no higher than three-eighths of an inch ( $3/8" = 10\text{mm}$ ) above the floor and shall have a beveled edge with a slope no greater than one-in-four (1:4) (25%).
- 29.3.4 Padding: If padding is installed, it shall not exceed one-quarter of an inch ( $1/4" = 6\text{mm}$ ) in thickness and shall be secured taut to the floor.

### 29.4 GRATINGS

If gratings are located in walking surfaces, then they shall have spaces no greater than one-half inch ( $1/2" = 13\text{mm}$ ) wide in one direction (See Fig. 29c). If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel. See Fig. 22b. (Repeated below.)



Gratings  
Figure 22b

## Public Toilet Rooms

**30.1 GENERAL**

Each public toilet room provided on a *site* or in a *building* shall comply with these Regulations.

- a. In each adult public toilet room, at least one toilet and one sink in each location shall be *accessible* to persons in wheelchairs, or a separate *accessible* unisex toilet room shall be provided at each location. Adult toilets shall comply with the provisions of **Sections 30.1 through 30.13**.
- b. Where children's toilet rooms are provided, at least one toilet and one sink in each location shall be accessible to children in wheelchairs, or a separate *accessible* unisex toilet room shall be provided at each location. Children's toilets shall comply with the provisions of **Sections 30.14 through 30.20**. For purposes of these Regulations, pre-kindergarten school is defined as a school which serves children from infancy up until but not including kindergarten. Elementary school is defined as a school which serves grades kindergarten through six.

**30.1.1** *Alterations:* Where it is technically infeasible to make a toilet room *accessible* or where plumbing code requirements prevent combining existing stalls, the installation of at least one unisex toilet/*bathroom* per floor shall be permitted in lieu of modifying the existing facilities.

**30.1.2** *Portable Toilets:* For single user portable toilets clustered at a single location, at least five percent (5%) but not less than one (1) *accessible* toilet unit shall be installed at each cluster. *Accessible* units shall be identified by the International Symbol of Accessibility. Portable units at *construction sites* used exclusively by *construction* personnel are not required to be *accessible*.

**30.2 LOCATION**

*Accessible* toilet rooms shall be on an *accessible route*. Where a unisex toilet room is provided, it shall be located in the same area as other toilet rooms.

**30.3 VESTIBULES**

Where vestibules are provided, they shall comply with **Section 25.3, Vestibules**.

**30.4 DOORS**

All doors to *accessible* toilet rooms shall comply with **Section 26, Doors and Doorways**. Doors shall not swing into the *clear floor space* required for any fixture.

**30.5 CLEAR FLOOR SPACE**

An unobstructed turning *space* complying with **Section 6.3, Wheelchair Space** shall be provided within an *accessible* toilet room. The *clear floor space* at fixtures and controls, the *accessible route*, and the turning *space* may overlap.



## Public Toilet Rooms

## 30.6 TOILET STALLS

If toilet stalls are provided, then at least one shall be a standard *accessible* toilet stall. Where six (6) or more stall are provided in a toilet room, at least one alternate *accessible* toilet stall (See Fig. 30c) shall be provided in addition to the standard *accessible* toilet stall. *Accessible* toilet stalls shall be on an *accessible route*.

- 30.6.1 Standard Accessible Toilet Stall: Standard *accessible* toilet stalls shall be at least sixty inches (60" = 1524mm) wide and seventy-two inches (72" = 1829mm) deep. See Fig. 30a and 30b. Arrangements shown for standard *accessible* toilet stalls may be reversed to allow either a left- or right-hand approach. Toilets in *accessible* stalls shall be located on the sixty inch (60" = 1524mm) wall and shall comply with Section 30.7.

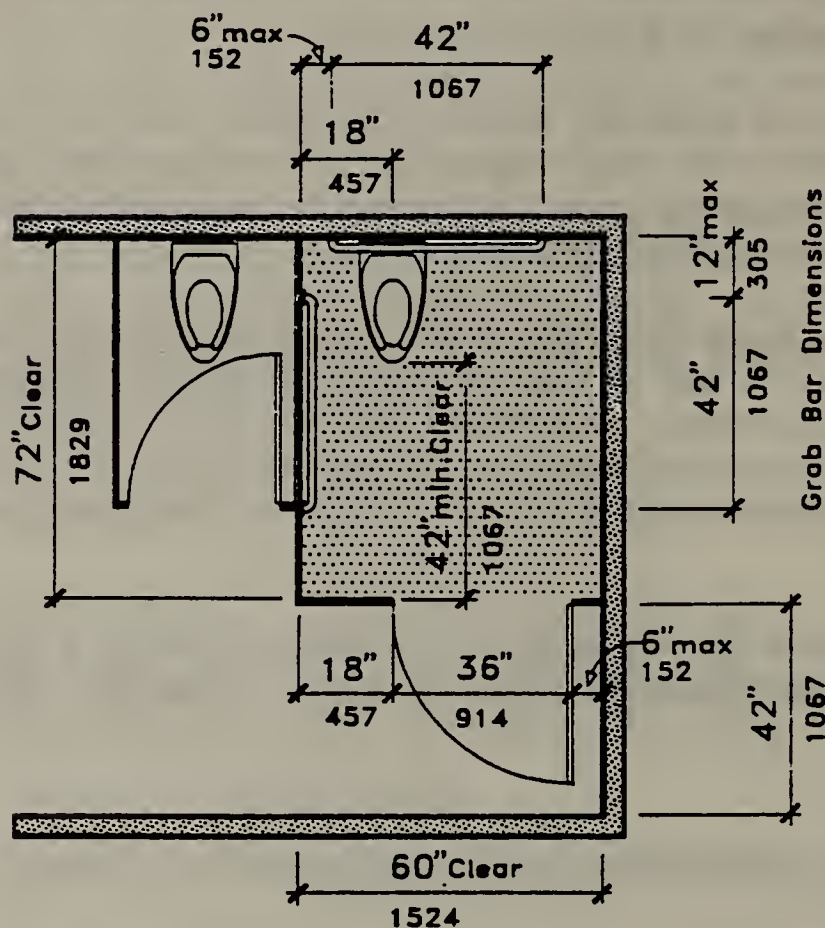
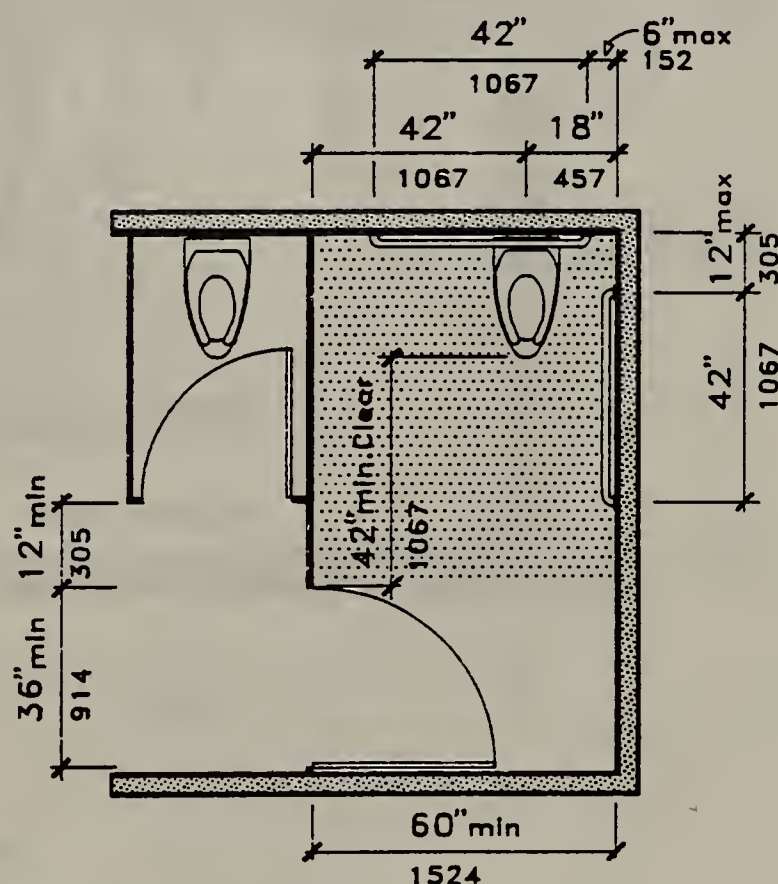


Figure 30a



## Public Toilet Rooms

- a. *Accessible* toilet stalls shall have a door or opening that is thirty-six inches (36" = 914mm) wide, and a door that swings out or slides.
- b. The stall door shall have an automatic self-closing hinge device, a pull device to assist in closing the door, and a lock located approximately thirty-six inches (36" = 914mm) above the floor that does not require tight grasping, pinching, or twisting of the wrist to operate.
- c. There shall be eighteen inches (18" = 457mm) of *clear space* on the latch pull side of the door.
- d. A coat hook shall be provided at a maximum height of fifty-four inches (54" = 1372mm) above the floor.



**Figure 30b**

## Public Toilet Rooms

30.6.2 Alternate Accessible Stall: Alternate *accessible* toilet stalls shall be thirty-six inches (36" = 914mm) wide with an outward swinging, self-closing door and parallel grab bars. See Fig. 30c.

- a. A coat hook shall be provided at a maximum height of fifty-four inches (54" = 1371mm) above the floor.

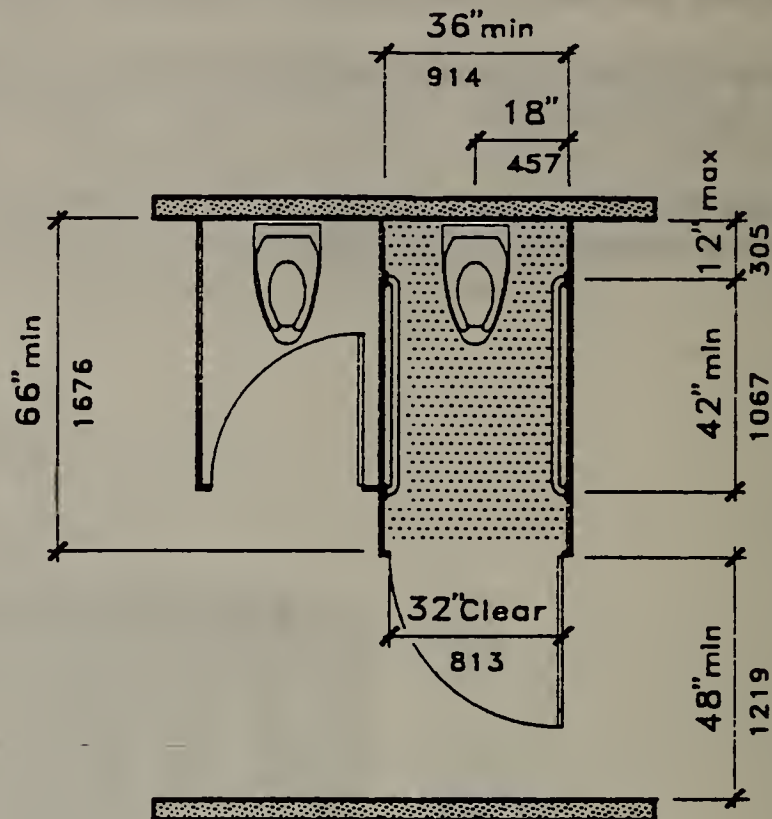


Figure 30c

Alternate Accessible Stall (in addition to accessible stall)

## Public Toilet Rooms

## 30.7 TOILETS

That are required to be *accessible* shall comply with the following:

- 30.7.1 *Clear floor space:* Clear floor space for toilets not in stalls shall comply with Fig. 30d. Clear floor space may be arranged to allow either a left-handed or right-handed approach to the toilet.

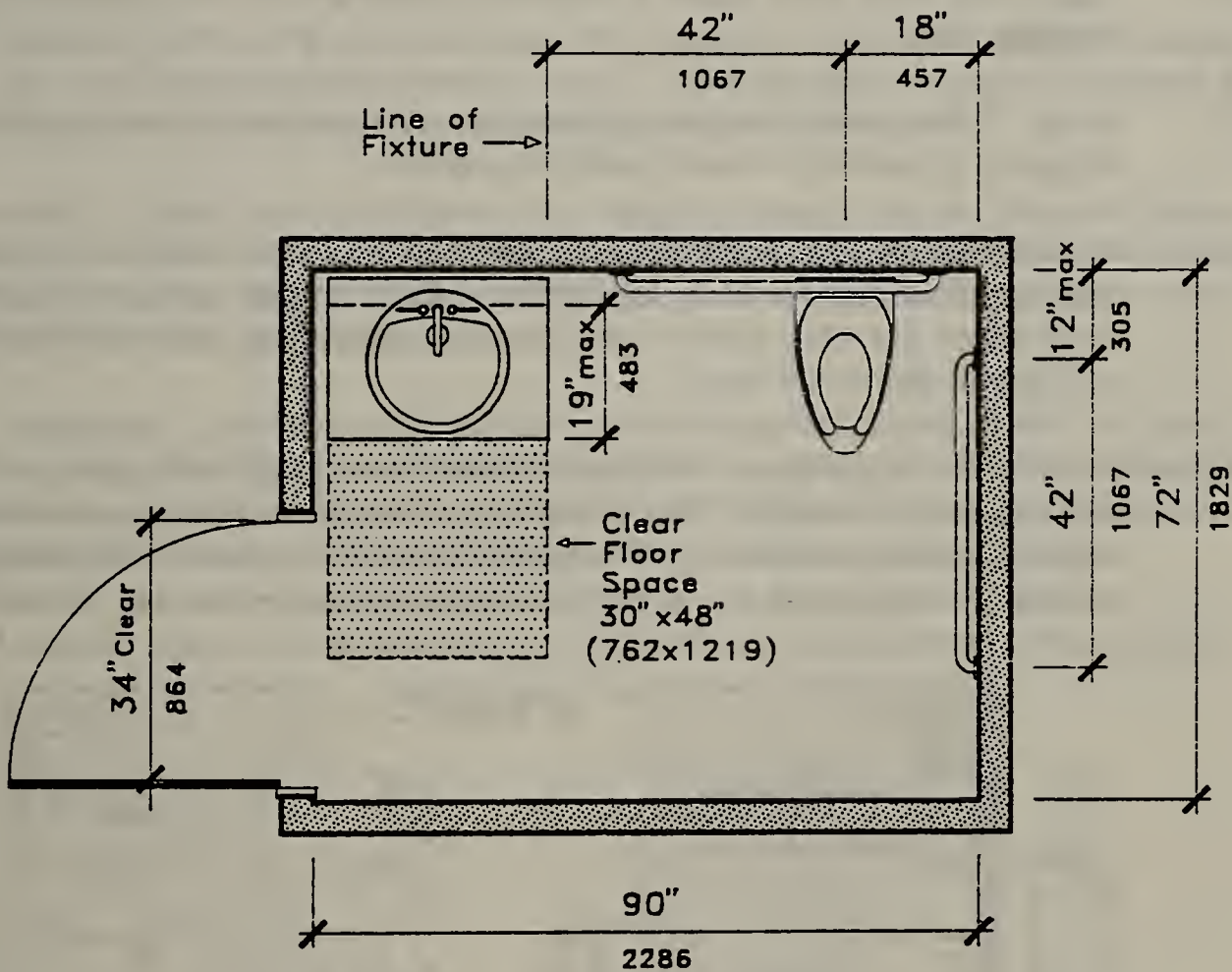


Figure 30d

Accessible Toilet Room



## Public Toilet Rooms

- 30.7.2 Location: The centerline of the toilet shall be located eighteen inches (18" = 457mm) from the nearest side wall and at least forty-two inches (42" = 1067mm) from the farthest side wall or the closest edge of an adjacent fixture. There shall be at least forty-two inches (42" = 1067mm) clearance between the front edge of the toilet and the nearest wall or fixture.
- 30.7.3 Height: Toilets shall be seventeen inches to nineteen inches (17" to 19" = 432mm to 483mm) high, measured to the top of the toilet rim. See Fig. 30e.
- 30.7.4 Type: The toilet shall have a narrow understructure that recedes sharply. See Fig. 30e.
- 30.7.5 Seats: Toilet seats shall be a continuous uninterrupted surface and shall not be spring mounted to return to a lifted position.
- 30.7.6 Flush Controls: Flush controls shall be hand operated or automatic and shall comply with Section 39.5, Operation. Controls for flush valves shall be mounted on the wide side of toilet areas no more than forty-four inches (44" = 1118mm) above the floor. Dispensers that control delivery or that do not permit continuous paper flow are not allowed.
- 30.7.7 Toilet Paper Dispensers: Toilet paper dispensers shall be located on the side wall closest to the toilet. The centerline of the roll shall be set at a minimum height of nineteen inches (19" = 483mm) above the floor. Dispensers that control delivery or that do not permit continuous paper flow are not allowed.

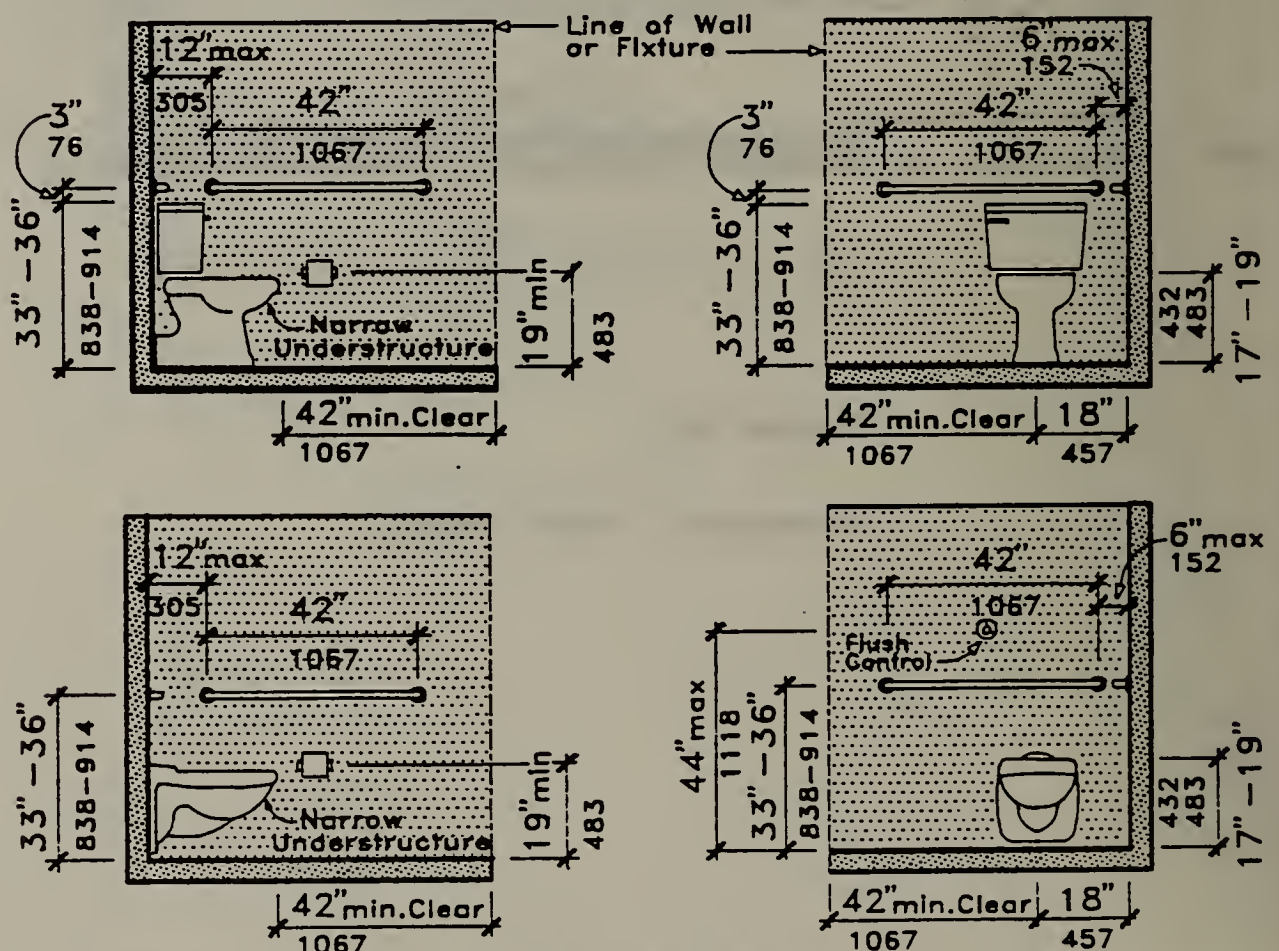


Figure 30e  
Accessible Toilet Stall Elevations

## Public Toilet Rooms

## 30.8 GRAB BARS

For the standard *accessible* toilet stall the toilet shall have two (2) grab bars forty-two inches (42" = 1067mm) long, one on the wall in back of the toilet and one on the side wall closest to the toilet. Grab bars shall comply with the *structural strength* defined in Section 5, Definitions. (See Fig. 30f for location, length and height). For the alternate *accessible* toilet stall, each of the parallel grab bars are to be forty-two inches long (42" = 1067mm), mounted thirty-three to thirty-six inches (33" to 36" = 838mm to 914mm) above the floor.

- 30.8.1 Location: The side grab bar shall be located a maximum of twelve inches (12" = 305mm) from the interior corner. The rear grab bar shall be located a maximum of six inches (6" = 152mm) from the interior corner.
- 30.8.2 Height: Grab bars shall be set at a height of thirty three to thirty six inches (33" to 36" = 838mm to 914mm) above and parallel to the floor. Where a tank prevents location of the rear grab bar, a bar may be installed three inches (3" = 76mm) above the tank.
- 30.8.3 Thickness: Grab bars shall be one and one-quarter inches (1-1/4" = 32mm) in outside diameter, have a one and one-half inch (1-1/2" = 38mm) clearance between the bar and the wall. See Fig. 30f. Note: There is no tolerance allowed on the one and one half inch (1-1/2" = 38mm) dimension.
- 30.8.4 Material: Grab bars shall also be non-rusting and acid-etched or roughened.

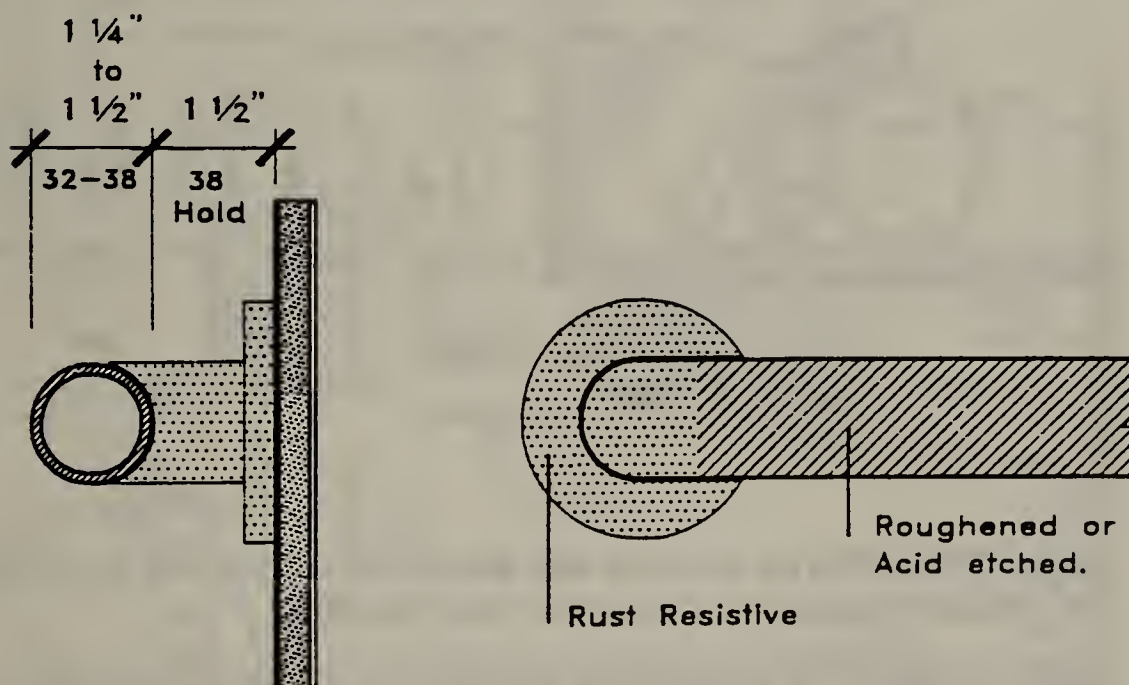


Figure 30f



## Public Toilet Rooms

## 30.9 SINK

Sinks, including vanities, shall comply with the following:

- 30.9.1 **Clear floor space:** A clear floor space complying with Section 6.3 **Wheelchair Turning Space** shall be provided in front of a sink to allow forward approach. The clear floor space shall be on an accessible route and shall extend no more than a maximum of nineteen inches (19" = 483mm) underneath the sink. See Fig. 30g.

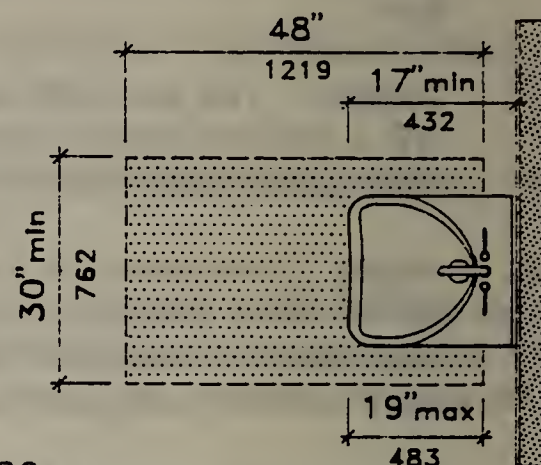


Figure 30g

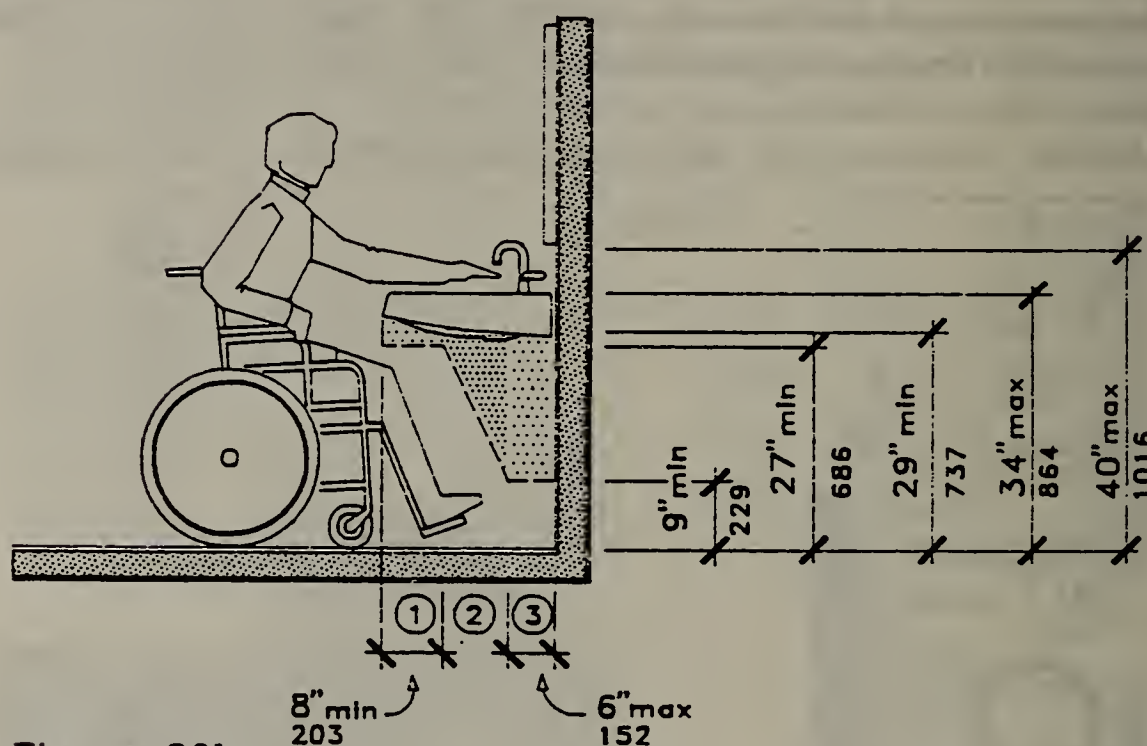


Figure 30h

- 30.9.2 **Height:** Sinks shall be mounted with the rim no higher than thirty-four inches (34" = 864mm) above the finish floor. See Fig. 30h.
- 30.9.3 **Knee Clearance:** A clearance of at least twenty-nine inches (29" = 737mm) above the finish floor to the bottom of the apron shall be provided. Knee and toe clearance shall be at least thirty inches (30" = 762mm) wide and nineteen inches (19" = 483mm) deep and shall comply with Fig. 30h .
- 30.9.4 **Depth:** Sink depth shall not exceed six inches (6" = 152mm).



## Public Toilet Rooms

- 30.9.5 Piping: Sink traps and drains shall be located as close to rear walls as possible. Hot water and drain pipes exposed under sinks shall be recessed, insulated, or guarded. There shall be no sharp or abrasive surfaces under sinks.
- 30.9.6 Faucets: Faucets shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. Lever-operated, push-type, touch-type, or electronically controlled mechanisms are acceptable designs. If self-closing valves are used the faucet shall remain open for at least 10 seconds.

### 30.10 URINALS

Where one or more urinals is provided, at least one urinal shall be *accessible*. See Fig. 30j.

- 30.10.1 Height: *Accessible* urinals shall be stall-type or wall-hung with an elongated rim at a maximum of seventeen inches (17" = 432mm) above the finish floor.
- 30.10.2 *Clear floor space*: A *clear floor space* shall be provided in front of an *accessible* urinal to allow forward approach. This *clear space* shall adjoin or overlap an *accessible route* and shall comply with **Section 6.3 Wheelchair Space**. Urinal shields that do not extend beyond the front edge of the urinal rim may be provided with twenty-nine inches (29" = 737mm) clearance between them.
- 30.10.3 Flush Controls: Flush controls shall be hand operated or automatic, and shall comply with **Section 39.5, Operation** and shall be mounted no more than forty-four inches (44" = 1118mm) above the finish floor. See Fig. 30j.

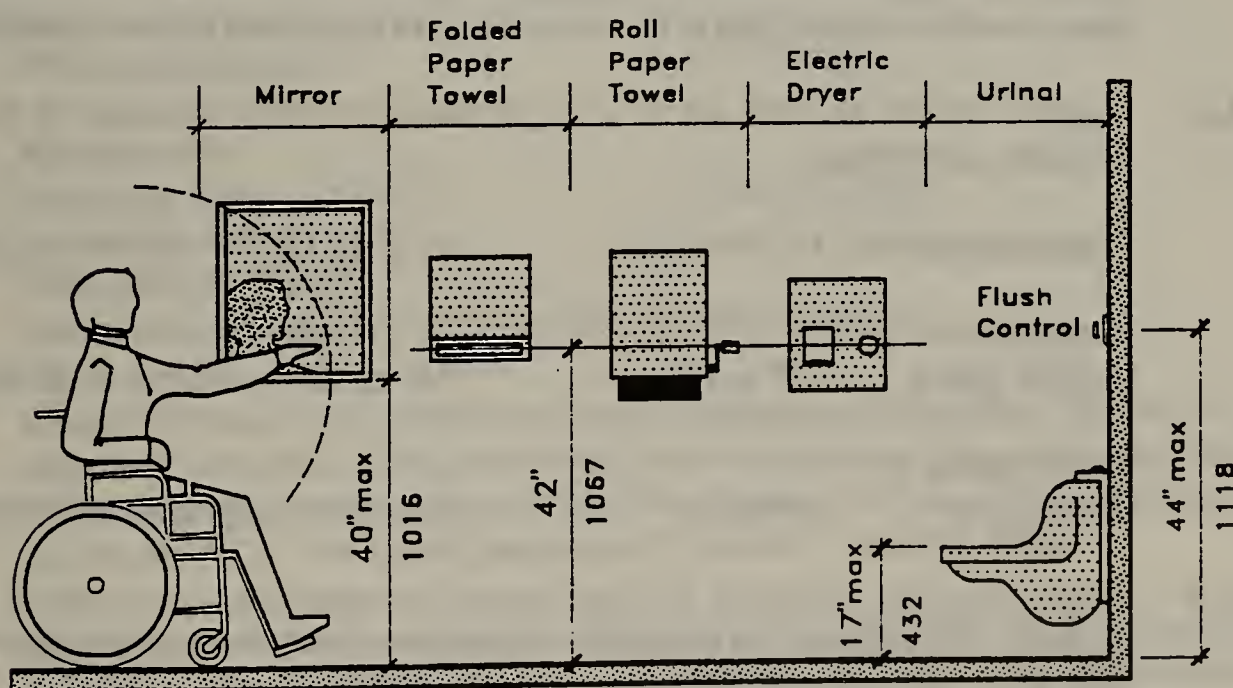


Figure 30j

## Public Toilet Rooms

**30.11 MIRROR**

The top of any shelf and or bottom of any mirror that is provided above a sink shall be set with the bottom edge of the reflecting surface no higher than forty inches (40" = 1016mm) above the finish floor. See Fig. 30j.

**30.12 DISPENSERS**

Towel dispensers, drying devices, or other types of devices and dispensers shall have at least one of each device mounted within the *zone of reach*. At least one of each device shall be located within reach of a person using the *accessible* sink. See Fig. 30j.

**30.13 CONTROLS AND RECEPTACLES**

If controls, receptacles, or other equipment is provided, then at least one of each shall be on an *accessible route* and shall comply with Section 39, Controls.

**30.14 CHILDREN'S TOILETS**

Shall comply with the following:

**30.14.1** *Clear floor space:* Clear floor space for toilets shall comply with Section 30.5. Clear floor space may be arranged to allow either a left-handed or right-handed approach.

**30.14.2** *Location:* The centerline of the toilet shall be located eleven inches (11" = 279mm) from the nearest side wall for pre-kindergarten; eleven to fifteen (11" to 15" = 279mm to 381mm) for kindergarten to third grade and fifteen to eighteen inches (15" to 18" = 381mm to 457mm) for fourth grade to sixth grade. The toilet shall also be located forty-two inches (42" = 1067mm) from the centerline of the toilet to the opposite wall or closest edge of next fixture.

**30.14.3** *Height:* Toilets shall be set at a height measured from the floor to the top of the seat as follows:

Pre-kindergarten: 11.5" to 12.5" (11.5" to 12.5" = 292mm to 318mm)

Kindergarten  
to third grade: 12" to 15" (12" to 15" = 305mm to 381mm)

Fourth grade to  
sixth grade: 15" to 17" (15" to 17" = 381mm to 432mm)

**30.14.4** *Flush Controls:* Controls for flush valves on water closets used by children shall be mounted on the wide side of toilet areas within twenty to thirty inches (20" to 30" = 508mm to 762mm) above the floor.



## Public Toilet Rooms

- 30.14.5 Toilet paper dispensers: Toilet paper dispensers used by children shall be centered above finished floor, as follows:

Pre-kindergarten: 14" (14" = 356mm)

Kindergarten  
to third grade: 14" to 17" (14" to 17" = 356mm to 432mm)

Fourth grade to  
sixth grade: 17" to 19" (17" to 19" = 432mm to 483mm)

### 30.15 CHILDREN'S GRAB BARS

The toilet shall have two grab bars, forty-two inches (42" = 1067mm) long, one mounted on the wall in back of the toilet and one on the side wall closest to the toilet.

- 30.15.1 Height: Grab bars shall be mounted from the floor to the top of the grab bar as follows:

Pre-kindergarten: 18" to 20" (18" to 20" = 457mm to 508mm)

Kindergarten  
to third grade: 20" to 25" (20" to 25" = 508mm to 635mm)

Fourth grade to  
sixth grade: 25" to 27" (25" to 27" = 635mm to 686mm)

- 30.15.2 Thickness: The diameter of grab bars shall be as follows:

Pre-kindergarten: 1" (1" = 25mm)

Kindergarten  
to sixth grade: 1-1/4" (1-1/4" = 32mm)

### 30.16 CHILDREN'S SINK

Sinks including vanities shall comply with the following:

- 30.16.1 Clear floor space: A *clear floor space* complying with Section 30.5 shall be provided in front of a sink to allow a forward approach. The *clear floor space* shall be on an *accessible route* and shall extend no more than a maximum of nineteen (19" = 483mm) underneath the sink. See Fig. 30g.

- 30.16.2 Height: Sinks shall be mounted with the rim no higher than thirty inches (30" = 762mm) above the finish floor. A clearance of at least twenty-seven inches (27" = 686mm) above the finish floor to the bottom of the apron shall be provided. Knee and toe clearance shall be at least thirty inches (30" = 762mm) wide and nineteen (19" = 483mm) deep and shall comply with Fig. 30h.



**Public Toilet Rooms**

30.16.3 Piping: Sink traps and drains shall be located as close to rear walls as possible. Hot water and drain pipes exposed under sinks shall be recessed, insulated, or guarded. There shall be no sharp or abrasive surfaces under sinks.

30.16.4 Faucets: Faucets shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. Lever-operated push-type, touch-type, or electronically controlled mechanisms are acceptable designs. If self-closing valves are used, the faucet shall remain open for at least ten seconds.

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**30.17 CHILDREN'S URINALS**

Where one or more urinal is provided, at least one urinal shall be *accessible*.

30.17.1 Height: The *Accessible* urinal shall be stall-type or wall-hung with an elongated rim at a maximum of fifteen (15" = 381mm) above the finish floor.

30.17.2 Flush Controls: Flush controls shall be hand operated or automatic, and shall be mounted no more than thirty inches (30" = 762mm) above the finish floor.

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**30.18 CHILDREN'S MIRROR**

The top of any shelf and or bottom of any mirror which is provided above a sink shall be set with the bottom edge of the reflecting surface no higher than thirty inches (30" = 762mm) above the finish floor.

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**30.19 CHILDREN'S DISPENSERS**

Towel dispensers, drying devices, or other types of devices and dispensers shall have at least one of each device mounted within the *zone of reach*, and at least one of each device shall be located within reach of a person using the *accessible* sink.

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**30.20 CHILDREN'S CONTROLS AND RECEPTACLES**

If controls, receptacles, or other equipment are provided, then at least one of each shall be mounted no higher than thirty-six inches (36" = 914mm) above the floor to the centerline of the operable portion of the control.

## Bathing Rooms

### 31.1 GENERAL

Each public bathing room provided on a *site* or in a *building* shall comply with these Regulations. Bathing rooms in *Multiple dwellings* shall comply with **Sections 42, Bathrooms in Group 1 Dwelling Units and 44 Bathrooms in Group 2 Dwelling Units** instead of this Section. Showers in hotels shall also comply with the requirements of this section. In each bathing room where a shower or bathtub is provided at least one of each shall be *accessible* to persons in wheelchairs or an *accessible* unisex bathing room shall be provided.

### 31.2 LOCATION

*Accessible* bathing rooms shall be on *accessible routes*.

### 31.3 VESTIBULES

Where vestibules are provided, they shall comply with **Section 26.7, Two Doors in a Series**.

### 31.4 DOORS

All doors to *accessible* bathing rooms shall comply with **Section 26, Doors and Doorways**. Doors shall not swing into the *clear floor space* required for any fixture.

### 31.5 OTHER FIXTURES

If bathing rooms have toilets and/or sinks, those fixtures shall comply with the requirements of **Section 30, Public Toilet Rooms**.

### 31.6 CLEAR FLOOR SPACE

The *accessible* fixtures and controls required in this Section shall be on an *accessible route*. An unobstructed wheelchair turning *space* complying with **Section 6.3, Wheelchair Turning Space** shall be provided. The *clear floor spaces* at fixtures and controls, the *accessible route*, and the wheelchair turning *space* may overlap.

### 31.7 SHOWER STALLS

*Accessible* shower stalls shall comply with the following:

31.7.1 Size: Shower stall size and *clear floor space* shall comply with **Fig. 31a or b**. The shower stall in **Fig. 31a** shall be thirty-six inches by thirty-six inches (36" by 36" = 914mm by 914mm). The shower stall in **Fig. 31b** will fit into the thirty by sixty inch (30" by 60" = 762mm by 1524mm) *space* required for a bathtub.

31.7.2 Floors: Floors shall be pitched to drain within the stall. Floors shall be carborundum, grit-face tile, or other *slip resistant* surface.

31.7.3 Controls: Showers shall operate by a single lever with a pressure balance mixing valve, and except in shower stalls thirty-six by thirty-six inches (36" by 36" = 914mm by 914mm) all controls shall be located on the center wall adjacent to the hinged seat. Faucets and other controls shall be located as shown in **Fig. 32c and d** and shall comply with **Section 39, Controls**.



## Bathing Rooms

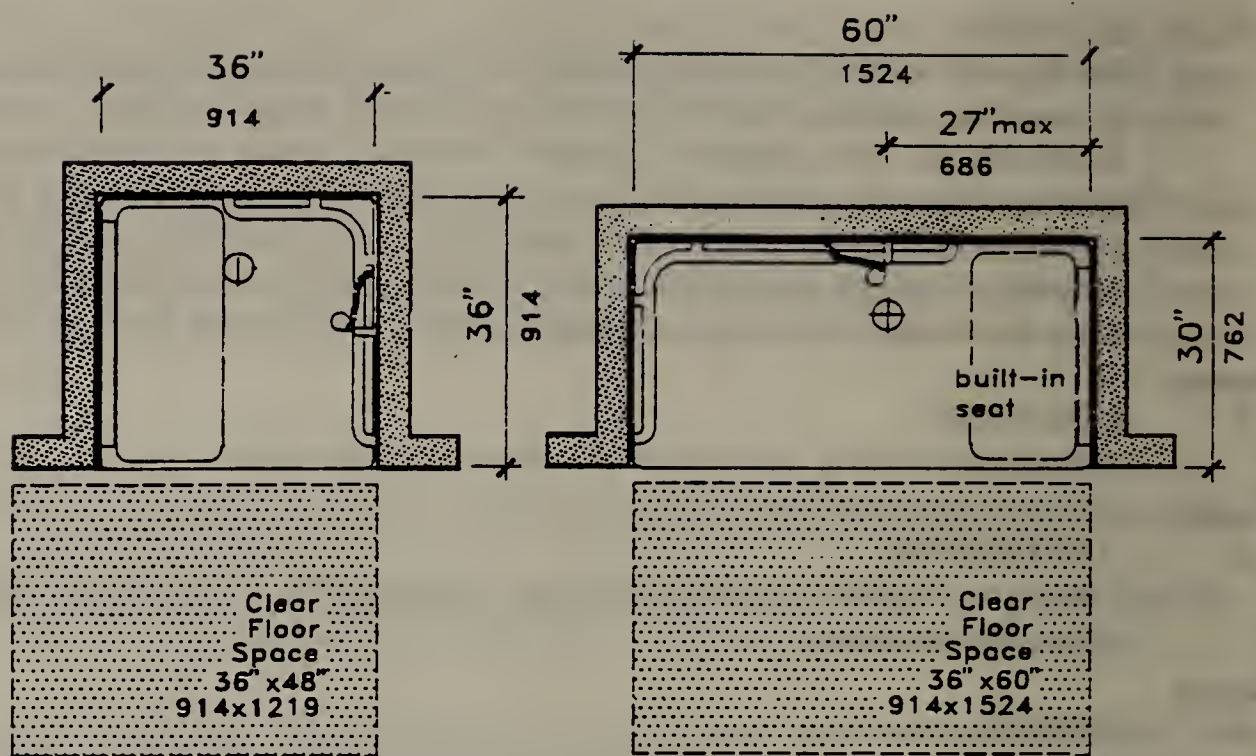


Figure 31a

Figure 31b

- 31.7.4 Seat: A seat shall be provided in the thirty-six inch by thirty-six inch (36" by 36" = 914mm by 914mm) shower stalls and shall be as shown in Fig. 31c. The seat shall be on the wall opposite the controls. In a thirty inch by sixty inch minimum (30" by 60" = 762mm by 1524mm) shower stall, a fixed seat shall be provided. It shall be a folding type and shall be mounted on the wall adjacent to the controls as shown in Fig. 31c and 31d.
- The seat shall be mounted seventeen inches to nineteen inches (17" to 19" = 432mm to 483mm) from the *bathroom* floor and shall extend the full depth of the stall.
  - The *structural strength* of seats and their attachments shall comply with the definition of *structural strength* in Section 5, Definitions.
  - The seat shall be padded.



## Bathing Rooms

31.7.5 Grab bars: Two grab bars shall be provided as shown in Fig. 31c and 31d.

- They shall be placed horizontally between thirty-three and thirty-six inches ( $33''$  to  $36'' = 838\text{mm}$  to  $914\text{mm}$ ) above the floor line or shall be a continuous L-shaped grab bar.
- The *structural strength* of grab bars and their attachments shall comply with the definition of *structural strength* in Section 5, Definitions.
- Grab bars shall be one and one-quarter inches ( $1\text{-}1/4'' = 32\text{mm}$ ) in outside diameter, and have a one and one-half inch ( $1\text{-}1/2'' = 38\text{mm}$ ) clearance between the bar and the wall. See Fig. 25a. Note: There is no tolerance allowed on the one and one half inch ( $1\text{-}1/2'' = 38\text{mm}$ ) dimension.
- Grab bars shall also be non-rusting and acid-etched or roughened.

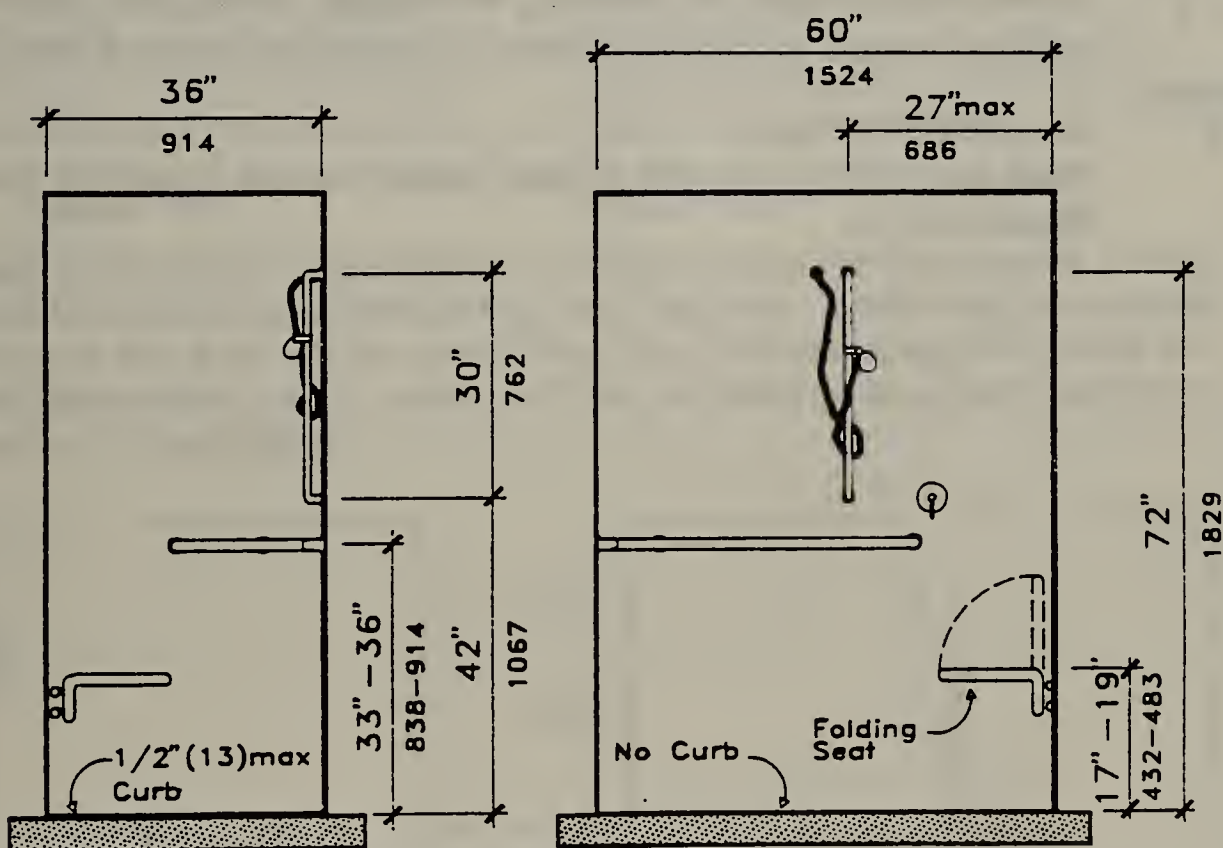


Figure 31c

Figure 31d

Accessible Shower Stall Elevations

**Bathing Rooms**

31.7.6 Soap trays shall not incorporate hand hold features unless they can support two hundred and fifty (250) pounds for five (5) minutes.

31.7.7 Spray Shower Unit. A shower spray unit attached to a flexible metal hose at least sixty inches (60" = 1524mm) long and adjustable from forty-two inches to seventy-two inches (42" to 72" = 1067mm to 1829mm) that can be used both as a fixed shower head and as a hand-held shower shall be provided.

Exception: In unmonitored facilities where vandalism is a consideration, a fixed shower head mounted at forty-eight inches (48" = 1219mm) above the shower floor may be used in lieu of a hand-held shower head.

31.7.8 Curbs: If provided, curbs in shower stalls thirty-six inches by thirty-six inches (36" by 36" = 914mm by 914mm) shall be no higher than one half inch (1/2" = 13 mm). Shower stalls that are thirty inches by sixty inches (30" by 60" = 762mm by 1524mm) minimum shall not have curbs.

31.7.9 Shower Enclosures: If provided, enclosures for shower stalls shall not obstruct controls or obstruct transfer from wheelchairs onto shower seats.

---

**31.8 GANG SHOWERS**

Shall also comply with this Section except for the provisions contained in Section 31.7.1.

Bathing Rooms

31.9 BATHTUBS

Accessible bathtubs shall comply with the following:

31.9.1 Clear floor space: Clear floor space in front of bathtubs shall be as shown in Fig. 31e and 31f.

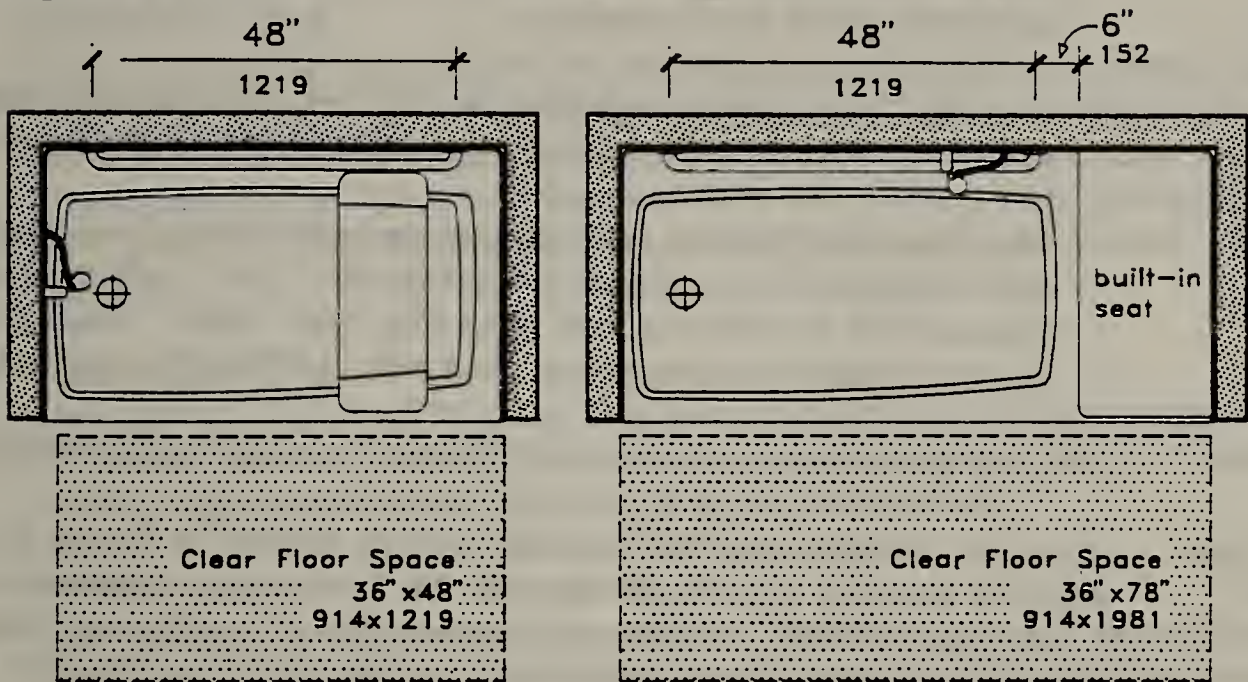


Figure 31e

Figure 31f

31.9.2 Seat: A removable in-tub seat or a built-in seat at the head end of the tub shall be provided as shown in Fig. 31g, and 31h. Seats shall be mounted securely and shall not slip during use. The structural strength of seats and their attachments shall comply with the definition of structural strength in Section 5, Definitions.

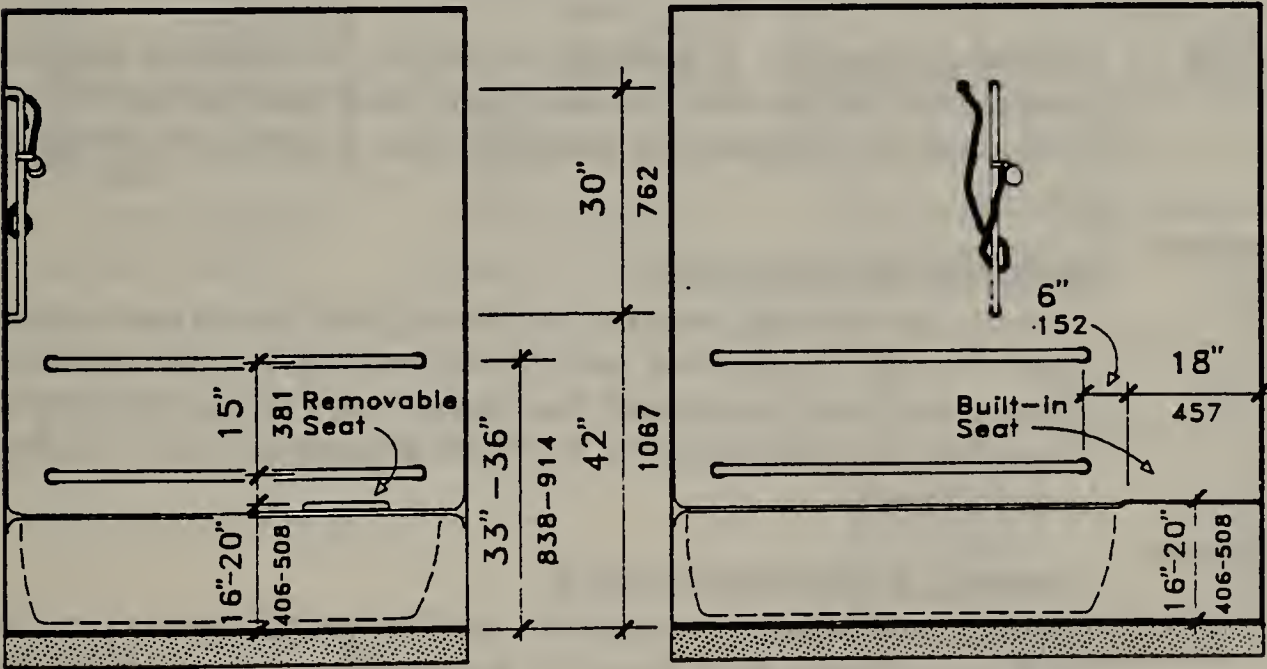


Figure 31g

Figure 31h

Accessible Bath Tub Elevations



**Bathing Rooms**

- 31.9.3 Grab Bars: Grab bars shall be provided as shown in Fig. 31g and h.
- a. The top grab bar shall be placed horizontally between thirty-three and thirty-six inches (33" = 838mm and 36" = 914mm) above the floor line and the lower grab bar shall be placed approximately fifteen inches (15" = 381mm) below the top grab bar.
  - b. The *structural strength* of grab bars and their attachments shall comply with the definition of *structural strength* in Section 5, Definitions.
  - c. Grab bars shall be one and one-quarter inches (1-1/4" = 32mm) in outside diameter, have a one and one-half inch (1-1/2" = 38mm) clearance between the bar and the wall. See Fig. 25a. Note: There is no tolerance allowed on the one and one half inch (1-1/2" = 38mm) dimension.
  - d. Grab bars shall also be non-rusting and acid-etched or roughened.
- 31.9.4 Controls: Faucets and other controls shall be located as shown in Fig. 31g and 31h and shall comply with Section 39, Controls. In bathtubs with built-in seats, all controls, faucets, and the shower unit shall be mounted on the long wall adjacent to the seat at thirty-eight to forty-eight (38" to 48" = 838mm to 1219mm) inches above the floor.
- 31.9.5 Shower spray unit: A shower spray unit with a hose at least sixty inches (60" = 1524mm) long that can be used both as a fixed shower head and as a hand-held shower shall be provided.
- 31.9.6 Soap trays shall not incorporate hand hold features unless they can support two hundred and fifty (250) pounds for five (5) minutes.
- 31.9.7 Bathtub Enclosures: If provided, enclosures for bathtubs shall not obstruct controls or transfer from wheelchairs onto bathtub seats or into tubs. Enclosures on bathtubs shall not have tracks mounted on the rim of the bathtub.

---

**31.10 MIRRORS AND SHELVES**

If mirrors and shelves are provided, then at least one of each shall be *accessible*. The top of any shelf and the bottom of any mirror which is provided above a sink shall be set with the bottom edge of the reflecting surface no higher than forty inches (40" = 1016mm) above the floor. A full length mirror is also allowed.

---

**31.11 CONTROLS AND DISPENSERS**

If controls, dispensers, receptacles, or other equipment are provided, then at least one of each shall be on an *accessible route* and shall comply with Section 39, Controls.

## Kitchens

## 32.1 GENERAL

Non-commercial kitchens in public facilities such as classrooms and community rooms shall provide a *clear space* of sixty inches (60" = 1524mm) in diameter, measured twelve inches (12" = 305mm) above the floor.

## 32.2 COUNTER TOPS

Counter tops that contain sinks and cooking units shall provide a minimum of fifteen inches (15" = 381mm) of *clear* countertop on at least one side of the cooking unit and on at least one side of the sink and shall have a *clear space* underneath that complies with Section 32.6. Countertops shall be mounted no higher than thirty-four inches (34" = 864mm) above the finish floor. See Fig. 32a.

## 32.3 WALL CABINETS

The bottoms of the wall cabinets shall be no higher than fifty-one inches (51" = 1295mm) above the finish floor and an adjustable shelf shall be installed between the counter top and the bottom of the wall cabinets.

## 32.4 PANTRY UNIT

A tall cabinet at least thirty inches (30" = 762mm) wide and seventy-two inches (72" = 1829mm) in height may be installed in lieu of making overhead cabinets *accessible*.

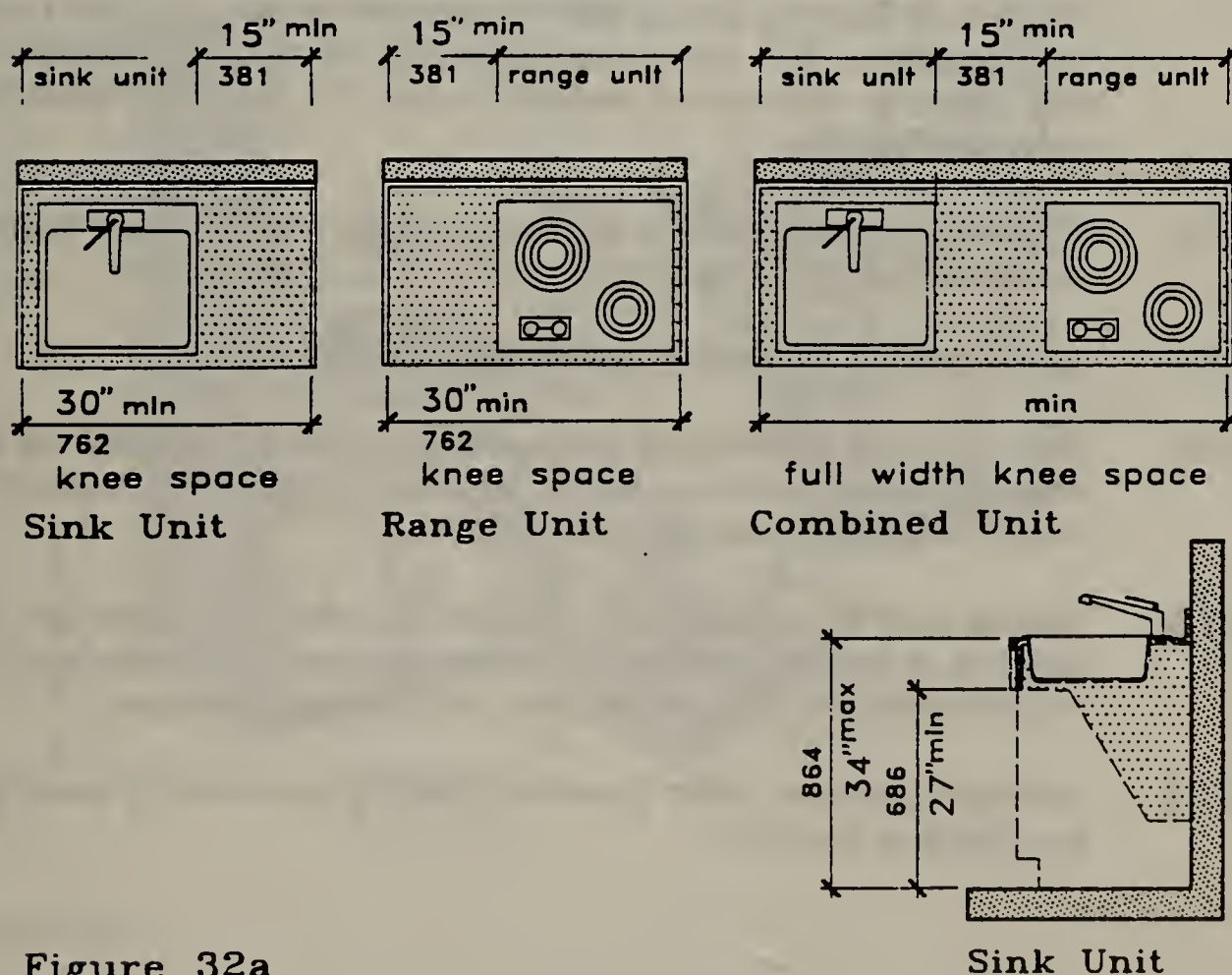


Figure 32a



**Kitchens****32.5 HARDWARE**

Cabinet hardware shall be operable with a closed fist. Cabinet opening devices shall be located at the top of base cabinets and at the bottom of wall cabinets.

**32.6 KNEESPACE**

Access *space* for the knees and feet of wheelchair users shall be provided under cooktops and sinks, and elsewhere as *space* and storage considerations permit.

32.6.1 All such spaces shall be at least thirty inches (30" = 762mm) wide, twenty-seven inches (27" = 686mm) high, and twenty-two inches (22" = 559mm) deep.

32.6.2 Where sink and cooking units are within fifteen inches (15" = 381mm) of each other, access *space* under the counter shall be continuous at a height of twenty-seven inches (27" = 686mm) to the underside of the counter.

**32.7 SINK**

Sinks shall comply with the following:

32.7.1 *Clear floor space:* A *clear floor space*, complying with Section 6.3, **Wheelchair Turning Space** shall be provided in front of a sink to allow forward approach. The *clear floor space* shall be on an *accessible route* and shall extend a maximum of nineteen inches (19" = 483mm) underneath the sink. See Fig. 30g.-

32.7.2 Sinks shall be mounted with the rim no higher than thirty-four inches (34" = 864mm) above the finish floor.

32.7.3 Sink depth shall not exceed six inches (6" = 152mm).

32.7.4 Sink traps and drains shall be located as close to rear walls as possible. Plumbing pipes shall be recessed, insulated, or guarded. There shall be no sharp or abrasive surfaces under sinks.

32.7.5 Faucets shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. Lever-operated, push-type, touch-type, or electronically controlled mechanisms are acceptable designs.

32.7.6 Garbage disposals, when provided, shall be controlled by switches under the counter at the front.



## Kitchens

### 32.8 COOKING UNITS

Shall comply with the following: See Fig. 32b.

- 32.8.1 Cooking units shall be the in-counter type with controls at the front of counter or counter faces, and with open access space under the counter.
- 32.8.2 Where hoods are provided above cooking units, controls shall be located no higher than fifty-four inches (54" = 1372mm) above the floor, but shall not be located behind cooking units.
- 32.8.3 Ovens shall be the wall-oven type, set at a height such that bottoms of doors are thirty inches (30" = 762mm) above the floor.
- 32.8.4 Bottom-hinged ovens shall provide retractable "bread board" type shelves concealed in the counter, adjacent to the oven door. If side-hinged, bread board shelf shall be located under the oven.
- 32.8.5 Ovens shall also be self-cleaning, or continuous cleaning.

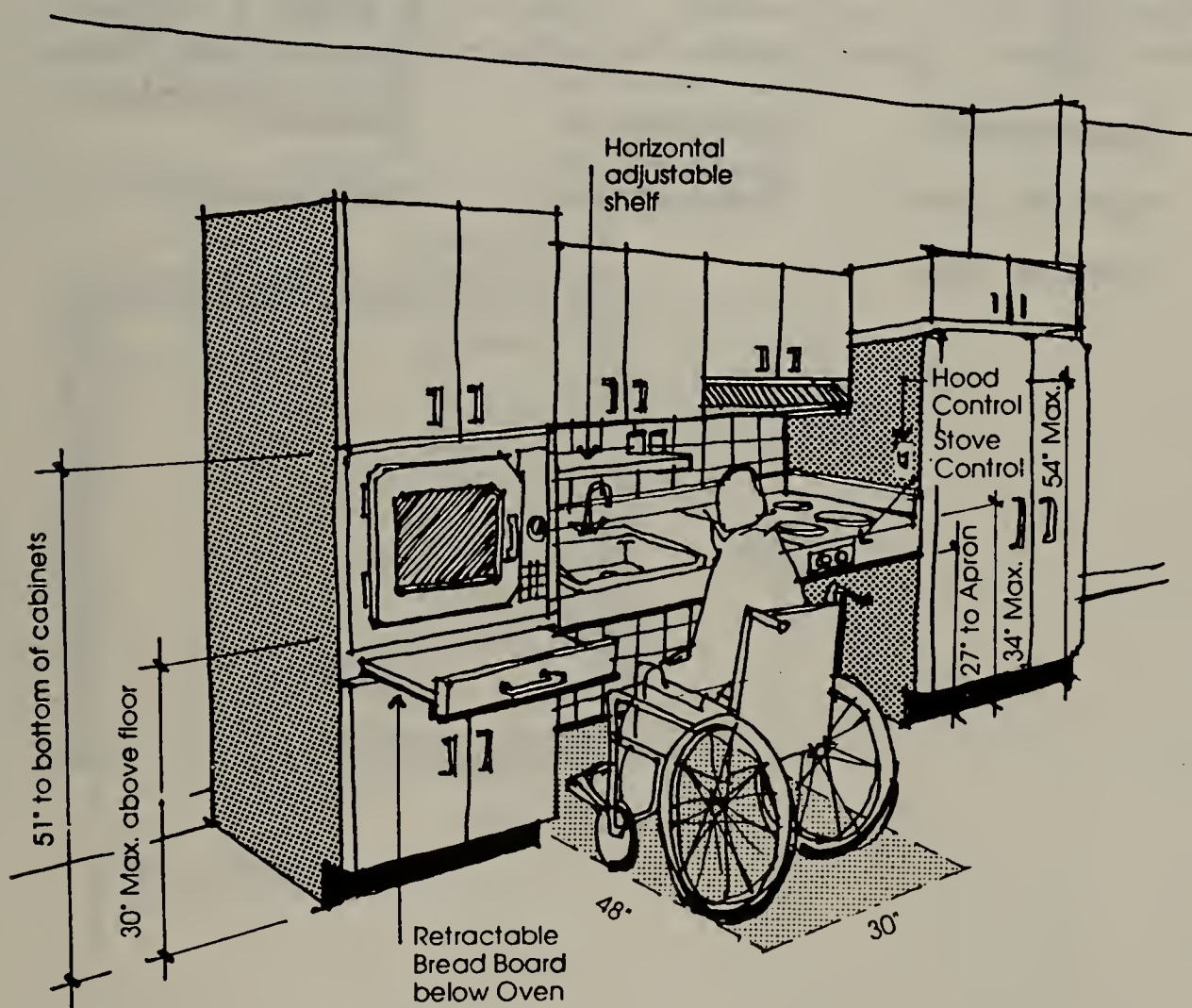


Figure 32b

Kitchens

32.9 REFRIGERATORS

May be combination refrigerator-freezers with two (2) doors side by side, or may be two (2) door freezer-above-the-refrigerator units, provided the bottom of such freezer is no higher than forty-four inches (44" = 1118mm) above the floor and shall be self-defrosting. See Fig. 32c.

Exception: In kitchenettes an undercounter type refrigerator is accepted.

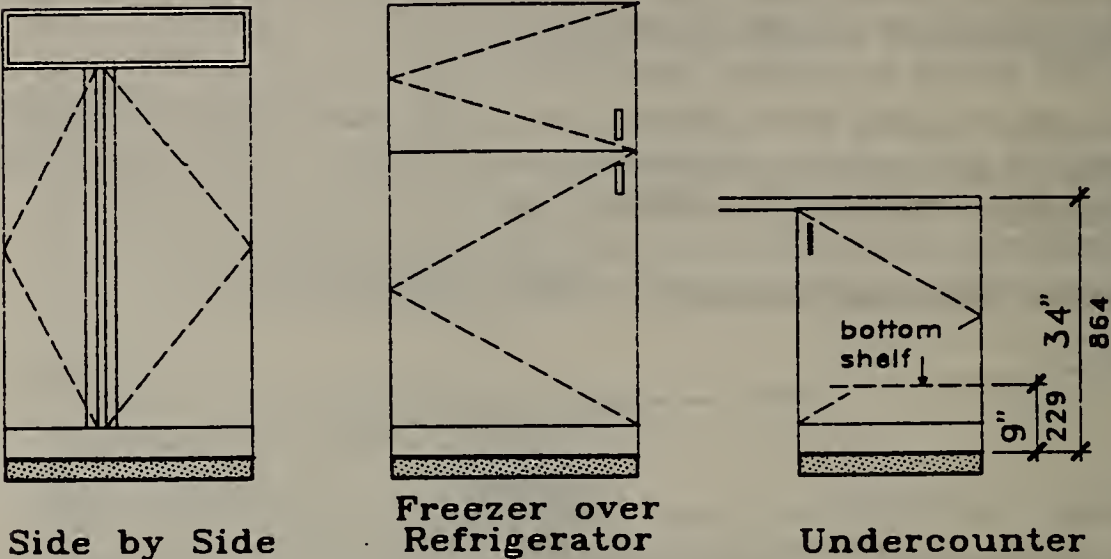


Figure 32c

32.10 CONTROLS

All controls and switches shall comply with Section 39, Controls.



## Changing Rooms

### 33.1 CHANGING ROOMS

Where provided, changing rooms and dressing rooms shall comply with the following:

### 33.2 DISTRIBUTION

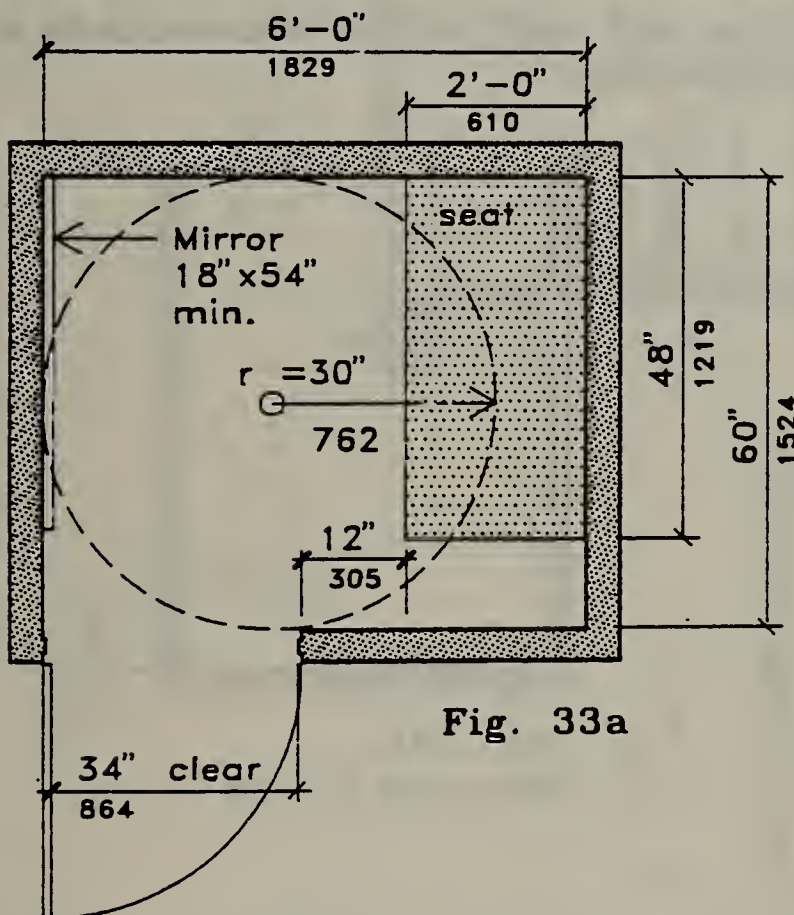
Five percent (5%), but never less than one, in each cluster of changing rooms shall be *accessible*. Where separate sex dressing rooms are provided, at least one such room for each sex shall be provided.

### 33.3 LOCATION

*Accessible* changing rooms shall be on an *accessible route* complying with Section 20, *Accessible Route*. A wheelchair turning *space* complying with Section 6.3, *Wheelchair Turning Space* shall be provided in every *accessible* changing room entered through a swinging door, sliding door or curtain.

### 33.4 SIZE

The *accessible* dressing room should be a minimum of five feet by six feet (5'-0" by 6'-0" = 1524mm by 1829mm). Floor area allowing a person using a wheelchair to make a sixty inch (60" = 1524mm) turn or t-turn shall be provided in every *accessible* changing room entered through a swinging or sliding door. See Fig. 33a.





## Changing Rooms

33.4.1 No door shall swing into any part of the turning space.

### 33.5 DOORS

All doors to *accessible* changing rooms shall be in compliance with Section 26, Doors and Doorways.

### 33.6 SEAT

Every *accessible* changing room shall have a seat that complies with the following:

33.6.1 The seat shall be twenty-four inches by forty-eight inches (24" x 48" = 610mm by 1219mm) and fixed to the wall along the shorter dimension.

33.6.2 The seat shall be mounted seventeen inches to nineteen inches (17" to 19" = 432 mm to 483mm) above the finish floor and open below with a minimum of twelve inches (12" = 305mm) in height. See Fig. 33b.

33.6.3 *Clear floor space* shall be provided alongside the bench to allow a person using a wheelchair to make a parallel transfer onto the seat.

33.6.4 The seat and attachments shall comply with the requirements for *structural strength* in Section 5, Definitions.

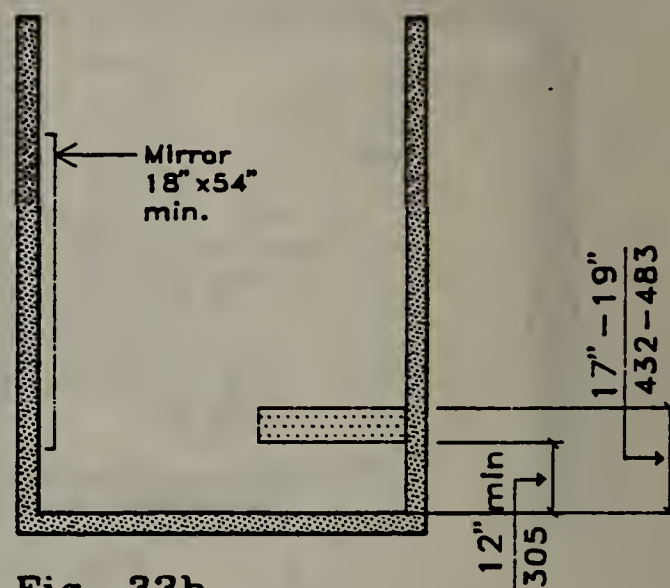


Fig. 33b  
Changing Rooms

### 33.7 MIRROR

Where mirrors are provided in changing rooms of the same *use*, then in an *accessible* changing room, a full-length mirror measuring at least eighteen inches wide by fifty-four inches high (18" by 54" = 457mm by 1372mm), shall be mounted eighteen inches (18" = 457mm) above the finish floor, in a position affording a view to a person on the bench as well as to a person in a standing position. See Fig. 33b.

## Storage

## 34.1 GENERAL

Fixed storage facilities such as cabinets, shelves, closets, and drawers that are required to be *accessible* shall comply with the following requirements.

## 34.2 CLEAR FLOOR SPACE

A *clear floor space* that allows either a forward or parallel approach by a person using a wheelchair shall be provided at *accessible* storage facilities.

## 34.3 HEIGHT

*Accessible* storage spaces shall be within at least one of the reach ranges specified in Section 6.5, **Forward Reach** and 6.6, **Side Reach**. See Fig. 24l and 24n. Clothes rods or shelves shall be a maximum of fifty-four inches (54" = 1372mm) above the finish floor for a side approach. Where the distance from the wheelchair to the clothes rod or shelf exceeds ten inches (10" = 254mm) (as in closets without *accessible* doors), the height and depth to the rod or shelf shall comply with Fig. 34a and 34b.

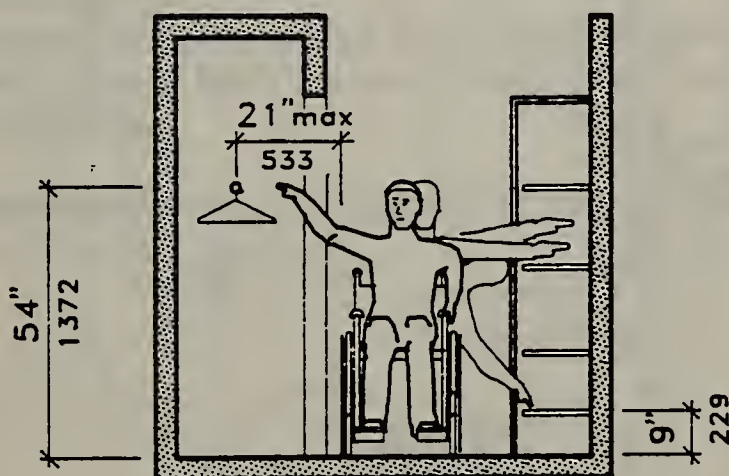


Figure 34a

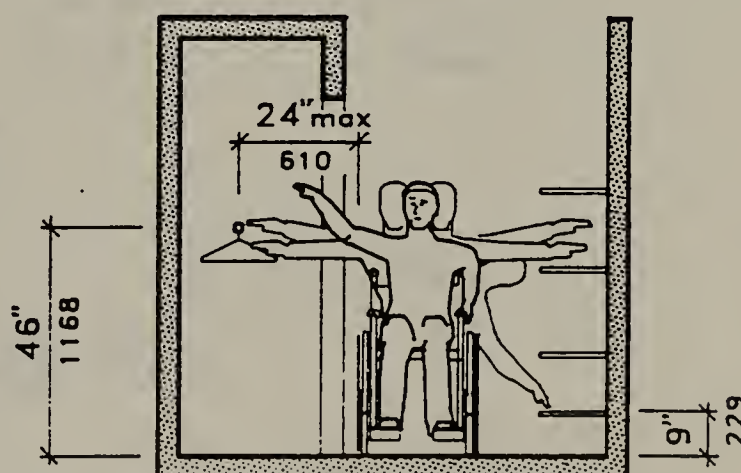


Figure 34b

**Storage****34.4 HARDWARE**

Hardware for *accessible* storage facilities shall comply with Section 26.11, Door Hardware. Touch latches and U-shaped pulls are acceptable. See Fig. 34c.

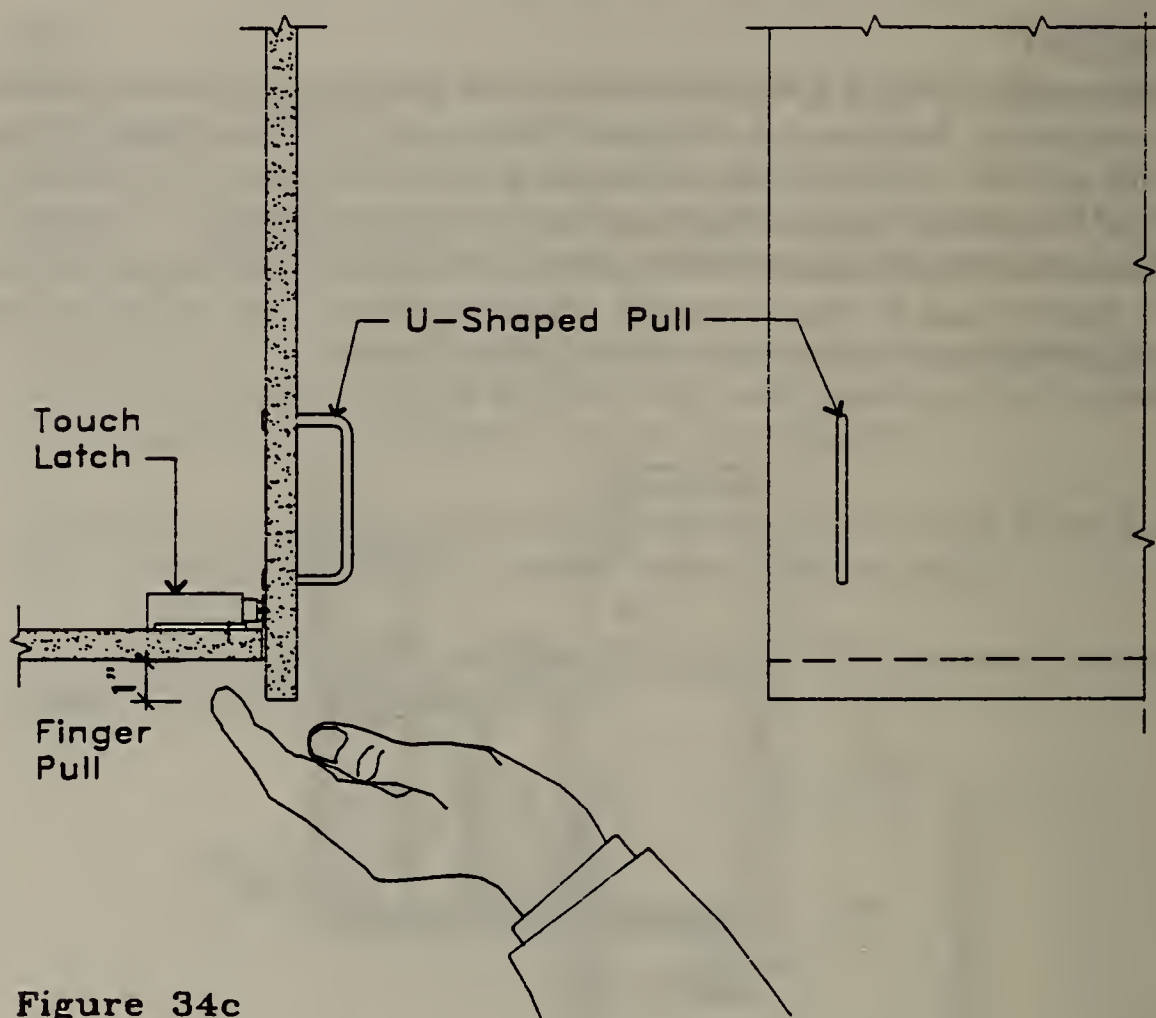


Figure 34c



## Tables and Seating

### 35.1 FIXED TABLES AND BUILT-IN SEATING

Where fixed tables or built in seating are provided, at least five percent (5%), but not less than one, of the fixed tables shall be *accessible*, be on an *accessible route*, and shall comply with the following. There shall be no fixed seats at *accessible* tables.

### 35.2 DISTRIBUTION

*Accessible* fixed tables shall be distributed by size and location throughout the *space* or *facility*. In establishments where separate areas are designated for smoking and non-smoking patrons, the required number of *accessible* fixed tables shall be proportionally distributed between the smoking and non-smoking areas.

### 35.3 CLEARANCES

Between fixed *accessible* tables there shall be at least thirty-six inches (36" = 914mm)

### 35.4 CLEAR FLOOR SPACE

*Clear Floor Space* shall be provided at each seating *space*. Such *clear floor space* shall not overlap *knee space* by more than nineteen inches (19" = 483mm). See Fig. 35a.

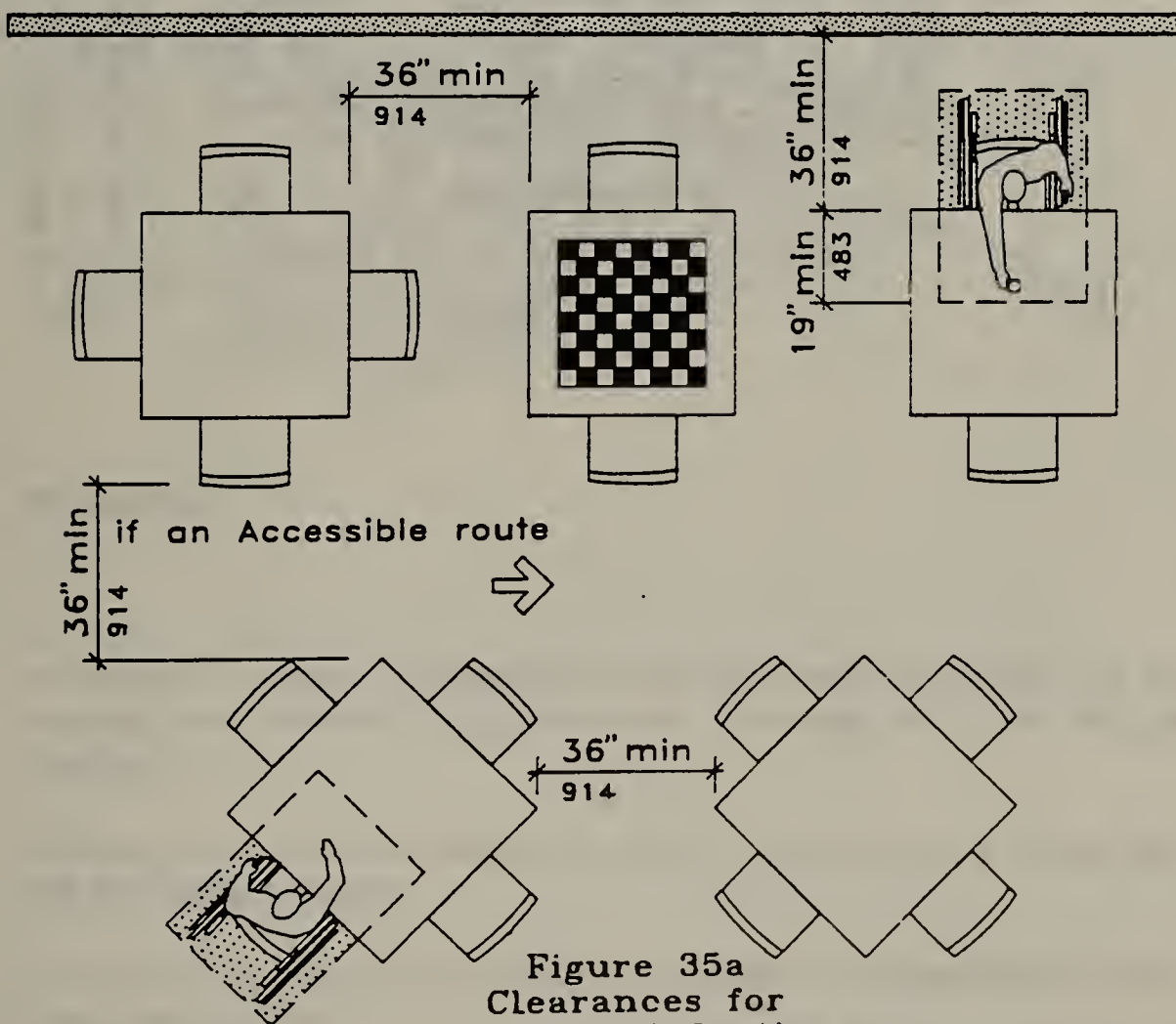


Figure 35a  
Clearances for  
Tables and Seating

**Tables and Seating****35.5 KNEE CLEARANCES**

If seating for people in wheelchairs is provided at tables or counters, knee spaces at least twenty-seven inches (27" = 686mm) high, thirty inches (30" = 762mm) wide, and nineteen inches (19" = 485mm) deep shall be provided. See Fig. 35b.

**35.6 HEIGHT OF TABLES OR COUNTERS**

The tops of *accessible* tables and counters shall be from twenty-eight inches to thirty-four inches (28" to 34" = 711mm to 864mm) above the finish floor or ground.

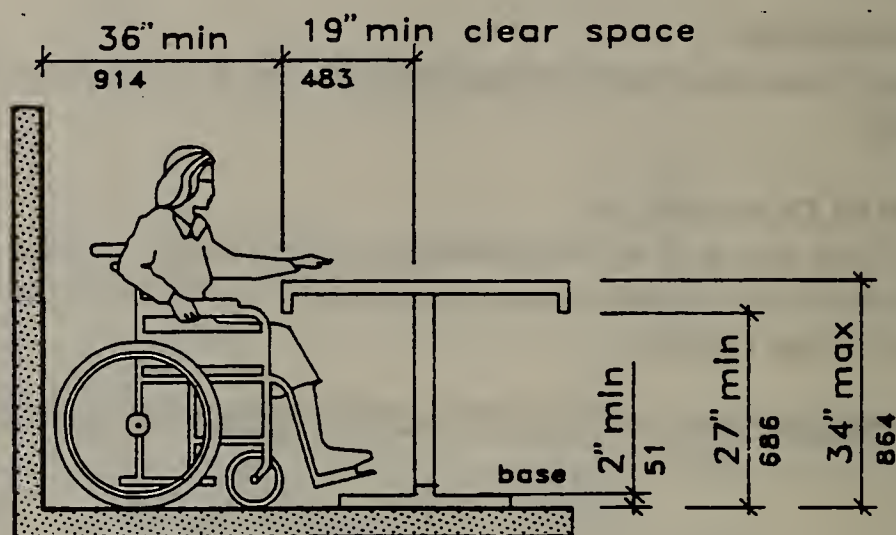


Figure 35b

## Drinking Fountains

### 36.1 GENERAL

Drinking fountains shall include water coolers. Drinking fountains, when provided, shall comply with the following requirements.

36.1.1 Where only one drinking fountain is provided on a floor there shall be a drinking fountain that is *accessible* to individuals who use wheelchairs and one *accessible* to those who have difficulty bending or stooping. This can be accommodated by:

a. the use of a "high-low" fountain; See Fig. 36a.

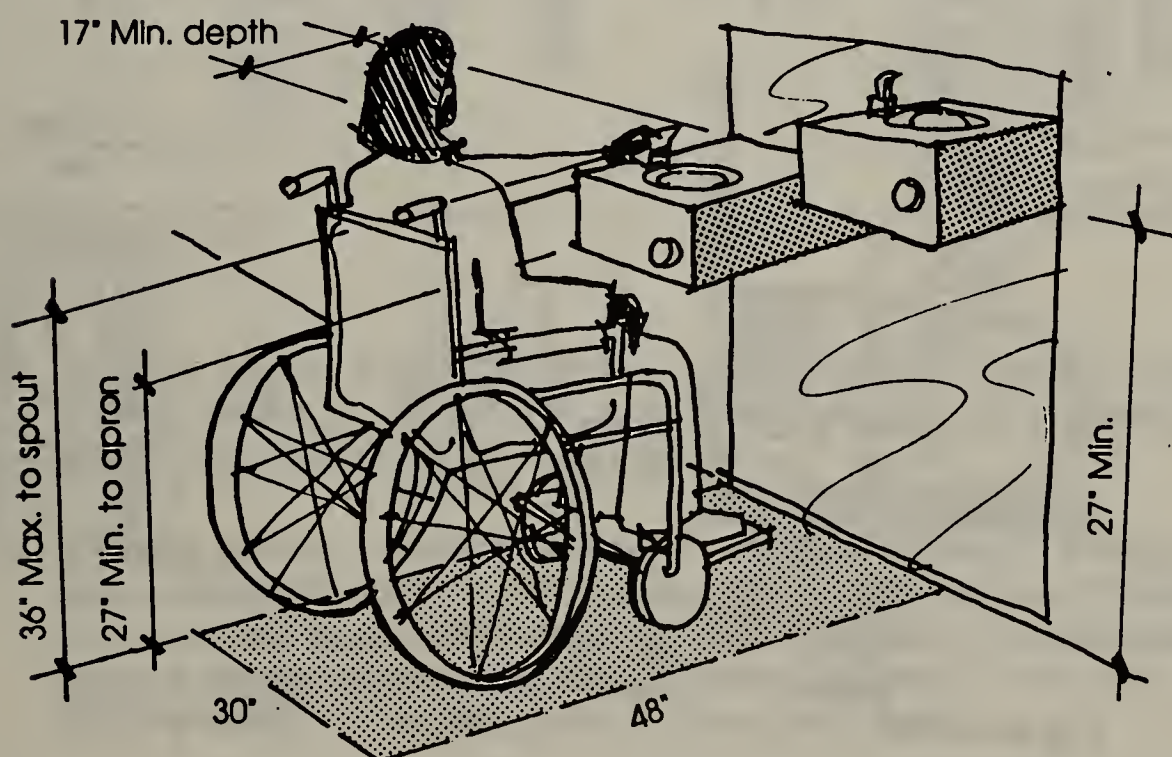


Figure 36a

- b. providing one fountain *accessible* to those who use wheelchairs and one fountain at a standard height convenient for those who have difficulty bending;
- c. providing an *accessible* fountain at a height reachable by a person who has trouble bending; or
- d. such other means as would achieve the required accessibility for each group on every floor.

36.1.2 Where more than one drinking fountain is provided on a floor, 50% of those provided shall be *accessible* and shall be on an *accessible route*.



## Drinking Fountains

### 36.2 CLEARANCES

Shall comply with the following:

- 36.2.1 Wall- and post-mounted cantilevered units allowing only a front approach shall have a clear knee *space* between the bottom of the apron and the floor or ground.
- The knee *space* shall be at least twenty-seven inches (27" = 686mm) high, thirty inches (30" = 762mm) wide, and seventeen inches to nineteen inches (17" to 19" = 432mm to 483mm) deep. See Fig. 36b and 36c.
  - These units shall also have a minimum *clear floor space* to allow a person in a wheelchair to approach the unit facing forward. See Fig. 36c.

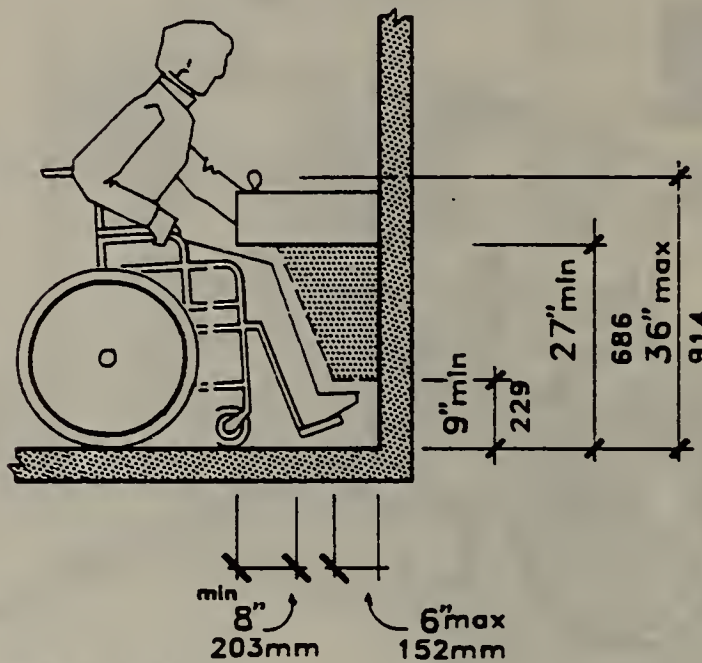


Figure 36b

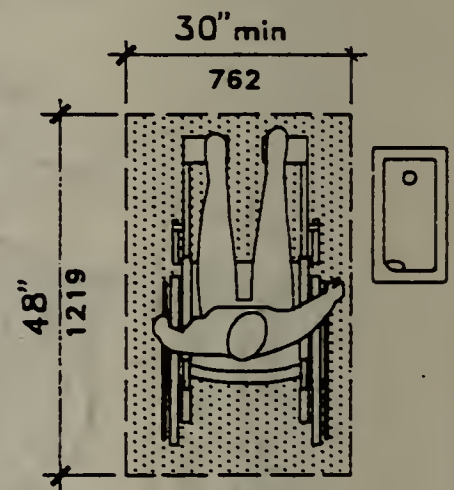


Figure 36d

- 36.2.2 Free-standing units not having a knee *space* under them shall have a *clear floor space* that allows a person in a wheelchair to make a parallel approach to the unit. See Fig. 36d. This *clear floor space* shall comply with Section 6.6, Side Reach.

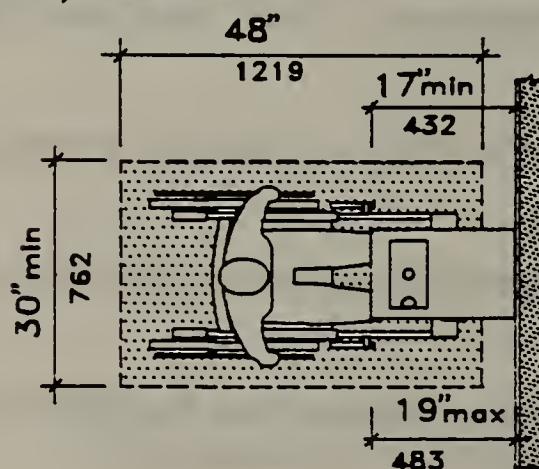
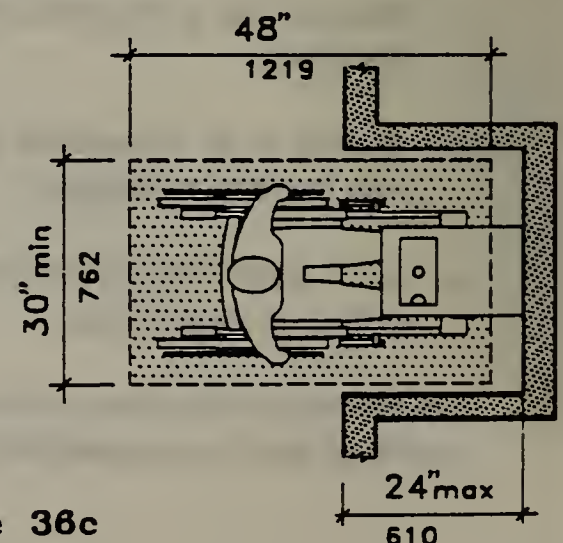


Figure 36c



## Drinking Fountains

36.2.3 Built-in units shall comply with the following:

- a. Where a drinking fountain is cantilevered or wall mounted along an *accessible route* it shall comply with the requirements of **Section 20.6, Protruding Objects**.

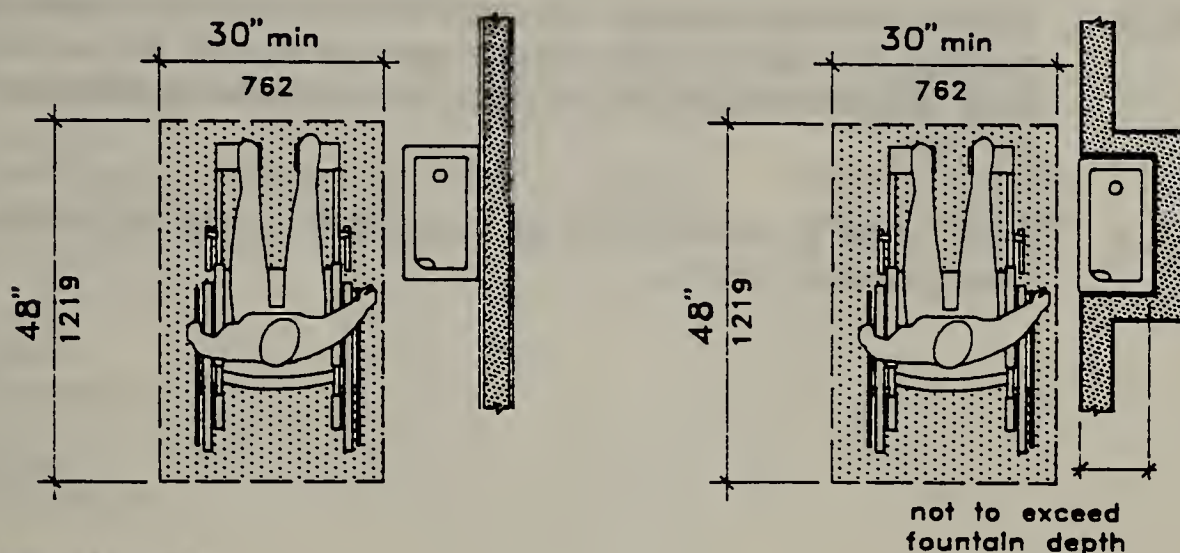


Figure 36e

- b. Where a drinking fountain is cantilevered in a recess, the recess shall be not less than thirty inches (30" = 762mm) wide, and the fountain shall comply with **Section 36.2.1**. See Fig. 36e.
- c. Where a drinking fountain is located in a recess and has no knee *space* below, the recess depth shall not exceed the fountain depth and the fountain shall have a *clear floor space* that allows a person in a wheelchair to make a parallel approach to the unit (See Fig. 36e). This *clear floor space* shall comply with **Section 6.4, Clear Floor Space**.

### 36.3 SPOUT LOCATION

The spouts of drinking fountains and water coolers shall comply with the following:

- 36.3.1 Spouts shall be located at the front of the unit and shall direct the water flow in a trajectory that is parallel or nearly parallel to the front of the unit.
- 36.3.2 The spout shall provide a flow of water at least four inches (4" = 102mm) high to allow the insertion of a cup or glass under the flow of water.
- 36.3.3 On an *accessible* drinking fountain with a round or oval bowl, the spout must be positioned so the flow of water is within three inches (3" = 76mm) of the front edge of the fountain.

### 36.4 SPOUT HEIGHT

Spouts shall be no higher than thirty-six inches (36" = 914mm), measured from the floor or ground surface to the spout outlet. See Fig. 36a.



**Drinking Fountains****36.5 CONTROLS**

Controls shall comply with the following:

- 36.5.1 Controls shall be front-mounted or side-mounted near the front edge of the drinking fountain.
- 36.5.2 Controls shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. Knob-type faucets are not permitted. The force required to activate the controls shall be no greater than five (5) ft-lb (22.2 N).
- 36.5.3 Other types of controls may be installed in addition to, but not instead of, hand operated controls.



## Public Telephones

**37.1 GENERAL**

Wherever public pay telephones, public *closed circuit telephones*, or other public telephones are provided, the number of *accessible* telephones shall be determined using the following requirements:

**37.1.1 Telephone Distribution:** Each bank\* should comply with the following formula according to the number of units:

\* A bank consists of two or more public telephones in a public space.

<u>Number of units in a bank</u>	<u>Accessible telephones required</u>	<u>TDD's required</u>	<u>Telephones with shelf and outlet required</u>
2	1	1	0
3 or more but less than 7	1	1	1
8 or more but less than 11	2	2	2
12 or more but less than 15	3	3	3
16 or more	25%	25%	25%

EXCEPTION: Single phone shall be *accessible* and have a *telecommunication device for the deaf (TDD)*.

**37.2 CLEAR FLOOR OR GROUND SPACE**

Unless otherwise specified, a *clear floor space* that allows either a forward or parallel approach by a person using a wheelchair shall be provided at *accessible* telephones. See Fig. 37a.

**37.2.1** The *clear floor space* shall comply with **Section 6.5 Forward Reach** or **6.6 Side Reach**. If a front approach is provided and the *clear* floor area includes *knee space* under the telephone, the *kneespace* shall be at least thirty inches (30" = 762mm) wide and thirty inches (30" = 762mm) high.

## Public Telephones

- 37.2.2 Bases, enclosures, and fixed seats shall not impede approaches to telephones by people who use wheelchairs.

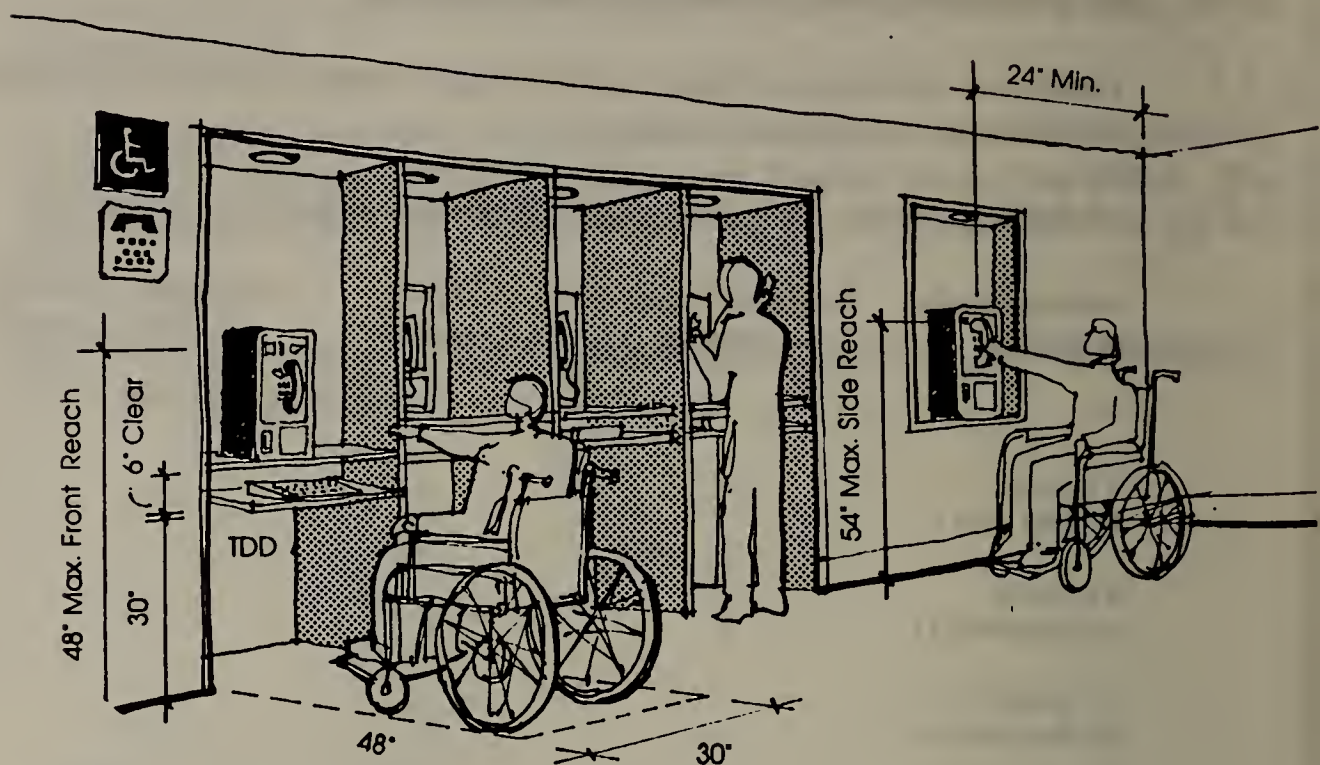


Figure 37a

### 37.3 MOUNTING HEIGHT

The highest *operable part* of the telephone, including dial, handset and coin deposit slots, shall be within the reach ranges specified in Section 6.5, Forward Reach or 6.6, Side Reach.

### 37.4 PROTRUDING OBJECTS

Accessible telephones shall be located on *accessible routes* and shall comply with Section 20.6, Protruding Objects. See Fig. 37b.

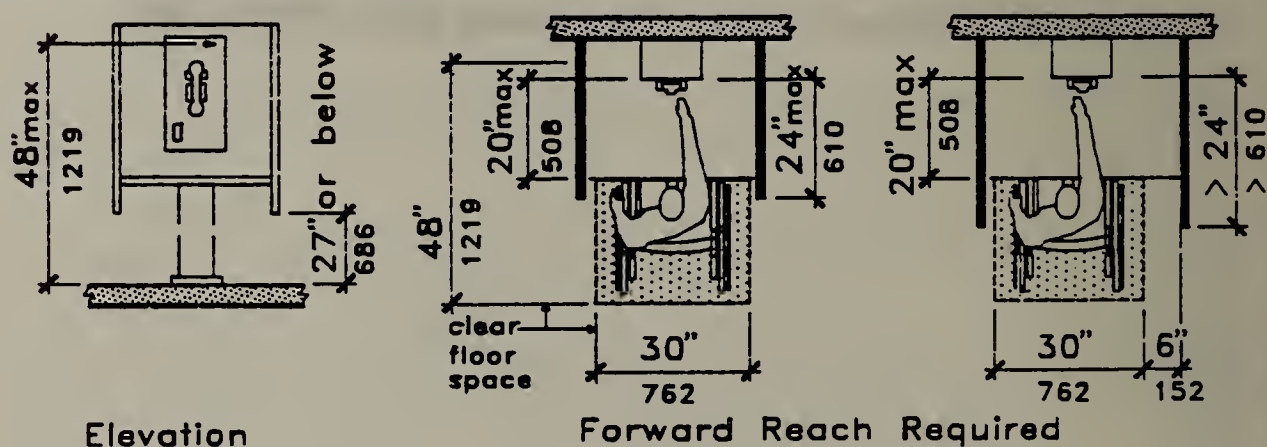


Figure 37b



**Public Telephones****37.5 HEARING AID COMPATIBLE AND VOLUME CONTROL TELEPHONES**

- All telephones shall be hearing aid compatible and shall be equipped with a volume control.

37.5.1 Volume controls, capable of a minimum of 12 dbA and a maximum of 18 dbA above normal, shall be provided. If an automatic reset is provided then 18 dbA may be exceeded.

37.5.2 Instructions for use of the volume control shall be attached to or next to the telephone.

**37.6 CONTROLS**

Telephones shall have push button controls where service for such equipment is available.

**37.7 CORD LENGTH**

The cord from the telephone to the handset shall be at least twenty-nine inches (29" = 735mm) long.

**37.8 TELEPHONE BOOKS**

Telephone books, if provided, shall be located in a position that complies with the reach ranges specified in **Sections 6.5, Forward Reach** and **6.6, Side Reach**.

**37.9 TELECOMMUNICATION DEVICES FOR THE DEAF (TDD)**

*Telecommunication device for the deaf (TDD)* used with a pay telephone shall be permanently affixed within the telephone enclosure. If an acoustic coupler is used, the telephone cord shall be at least twenty-nine inches (29" = 737mm) long to allow connection of the *telecommunication device for the deaf (TDD)* to the telephone receiver.

**37.10 TELEPHONES WITH SHELF AND OUTLET**

Pay telephones designed to accommodate a portable *telecommunication device for the deaf (TDD)* shall be equipped with a shelf and an electrical outlet within or adjacent to the telephone enclosure. The telephone handset shall be capable of being placed flush on the surface of the shelf. The shelf shall be at least nine inches wide by twelve inches deep (9" x 12" = 229mm x 305mm) and shall have six inches (6" = 152mm) minimum vertical clearance. See Fig. 37c.

**37.11 SIGNAGE**

Symbols of accessibility and directional *signage* shall be provided to comply with the following:

37.11.1 *Telecommunication devices for the deaf (TDD)* shall be identified by the international TDD symbol. See Fig. 41c.



**Public Telephones****37.11.2** Directional *Signage* for *telecommunication device for the deaf (TDD)*:

If a *facility* has a public *telecommunication device for the deaf (TDD)*, directional *signage* indicating the location of the nearest *telecommunication device for the deaf (TDD)* shall be placed adjacent to all banks of telephones which do not contain a *telecommunication device for the deaf (TDD)*. Such directional *signage* shall include the international TDD symbol.

**Automated Teller Machines (ATM)****38.1 GENERAL**

Where only one automated teller machine (ATM) is provided, it shall comply with this Section. Where two or more are provided at a location, then only one must comply. Each machine required to be *accessible* shall be on an *accessible route*.

Exception: Drive up teller machine.

**38.2 CONTROLS**

Controls for user activation shall comply with the requirements of Section 39, Controls.

**38.3 CLEARANCES AND REACH RANGE**

Free standing or built-in units not having a *clear space* under them shall provide a *clear floor space* in front that allows a forward or a parallel approach to the unit allowing a person in a wheelchair to access the controls and dispensers. The highest *operable part* of controls, dispensers, receptacles, and other operable equipment shall be placed within at least one of the reach ranges specified in Sections 6.5, Forward Reach and 6.6, Side Reach.

**38.4 EQUIPMENT FOR PERSONS WITH VISION IMPAIRMENTS**

Instructions and all information for use on the *accessible* units shall be made *accessible* to and independently usable by persons with vision impairments.

**Automated Teller Machines (ATM)**

No Text this Page



**Controls****39.1 GENERAL**

Controls and operating mechanisms in *accessible spaces*, along *accessible routes*, or as parts of *accessible elements* shall be *accessible* and shall comply with this Section. For example: light switches and dispenser controls shall be *accessible* and shall comply with the requirements of this Section.

**39.2 CLEAR FLOOR SPACE**

*Clear floor space* that allows a forward or a parallel approach by a person using a wheelchair shall be provided at controls, dispensers, receptacles, and other operable equipment.

**39.3 HEIGHT**

The highest *operable part* of controls, dispensers, receptacles, and other operable equipment shall be placed within at least one of the reach ranges specified in **Sections 6.5, Forward Reach** and **6.6, Side Reach**.

**39.3.1** Electrical and communications system receptacles on walls shall be mounted with a centerline no less than eighteen inches (18" = 457mm) above the floor.**Exception:**

These requirements do not apply where the use of special equipment dictates otherwise or where electrical and communications systems receptacles are not normally intended for use by *building* occupants.

**39.4 LOCATION**

All such controls shall be located at least eighteen inches (18" = 457mm) from an interior corner.

**39.5 OPERATION**

Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lb/ft (22.2 N).

Controls

No Text This Page

**Alarms****40.1 GENERAL**

If emergency warning systems are provided, then they shall include both audible alarms and visual alarms.

40.1.1 *Sleeping accommodations* for persons with hearing impairments (see Section 8.3.5, **Transient Lodging Facilities**) shall have an alarm system that complies with Section 8.5, **Sleeping Accommodations**.

40.1.2 Emergency warning systems in medical care facilities may be modified to suit standard health care alarm design practice.

**40.2 AUDIBLE ALARMS**

If provided, audible emergency alarms shall produce a sound that exceeds the prevailing equivalent sound level in the room or *space* by at least 15 dbA or exceeds any maximum sound level with a duration of 60 seconds by 5 dbA, whichever is louder. Sound levels for alarm signals shall not exceed 120 dbA.

**40.3 VISUAL ALARMS**

At a minimum, visual signal appliances shall be provided in *buildings* and facilities in each of the following areas: restrooms and any other general usage areas (e.g. meeting rooms), hallways, lobbies, and any other area for *common use*.

40.3.1 Visual alarm signal appliances shall be integrated into the *building* or *facility* alarm system. If single station audible alarms are provided, then single station visual alarm signals shall be provided.

40.3.2 Visual alarm signals shall have the following minimum photometric features:

- a. The lamp shall be a xenon strobe type or equivalent.
- b. The color shall be clear or nominal white (i.e., unfiltered or clear filtered white light).
- c. The maximum pulse duration shall be two-tenths of one second (0.2 sec) with a maximum duty cycle of 40 percent (40%). The pulse duration is defined as the time interval between initial and final points of 10 percent of maximum signal.
- d. The intensity shall be a minimum of 75 candela.
- e. The flash rate shall be a minimum of 1 Hz and a maximum of 3 Hz.

40.3.3 Visual alarm signals shall have the following location features:

- a. The appliance shall be placed eighty inches (80" = 2032mm) above the highest floor level within the *space* or six inches (6" = 152mm) below the ceiling, whichever is lower.



**Alarms**

- b. In general, no place in any room or *space* required to have a visual signal appliance shall be more than fifty feet (50' = 15m) from the signal (in the horizontal plane). In large rooms and *spaces*, such as auditoriums, exceeding one hundred feet (100' = 30m) across, without obstructions six feet (6' = 2m) above the finish floor, devices may be placed around the perimeter, spaced a maximum one hundred feet (100' = 30m) apart, in lieu of suspending appliances from the ceiling.
- c. No place in common corridors or hallways in which visual alarm signaling appliances are required shall be more than fifty feet (50' = 15m) from the signal.

---

**40.4****AUXILIARY ALARMS**

Units and *sleeping accommodations* shall have a visual alarm connected to the *building* emergency alarm system or shall have a standard 110-volt electrical receptacle into which such an alarm can be connected and a means by which a signal from the *building* emergency alarm system can trigger such an auxiliary alarm.

- 40.4.1 When visual alarms are in place the signal shall be visible in all areas of the unit or room.
- 40.4.2 Instructions for use of the auxiliary alarm or receptacle shall be provided.

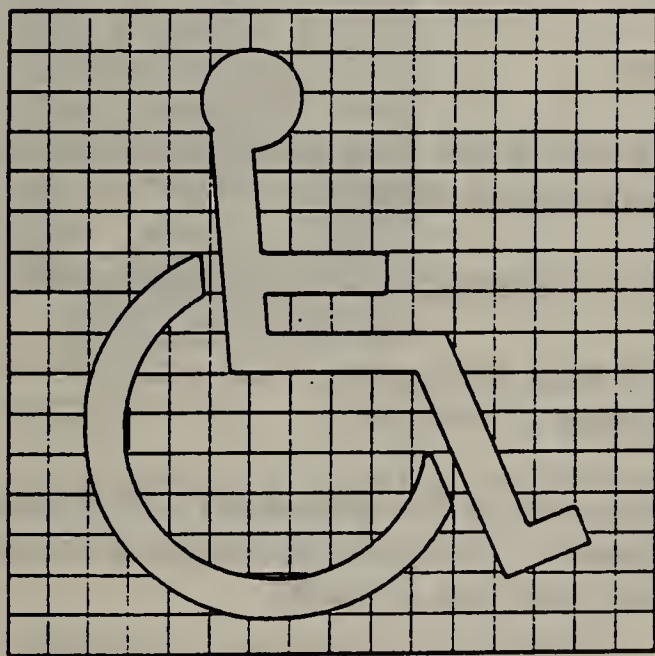
## Signage

## 41.1 GENERAL

The following types of *signage* shall be provided:

- 41.1.1 Signs that designate permanent rooms and spaces shall comply with Sections 41.2, 41.5 and 41.6. These include toilet room signs, room numbers, stair signs, etc.
- 41.1.2 Other signs that provide direction to, or information about, functional spaces of the *building* shall comply with Sections 41.3, 41.4, and 41.6.
- 41.1.3 *Elements* and spaces of *accessible* facilities which shall be identified by the International Symbol of Accessibility (See Fig. 41a) and which shall comply with Section 41.7 are:
  - a. Parking spaces designated as reserved for individuals with disabilities;
  - b. *Accessible* passenger loading zones;
  - c. *Accessible entrances* when not all are *accessible* (*inaccessible entrances* shall have directional *signage* to indicate the *route* to the nearest *accessible entrance*);
  - d. *Accessible* toilet and bathing facilities when not all are *accessible*.

Exception: *Building* directories, menus, and all other signs that are temporary are not required to comply.



International Symbol of Accessibility

Figure 41a

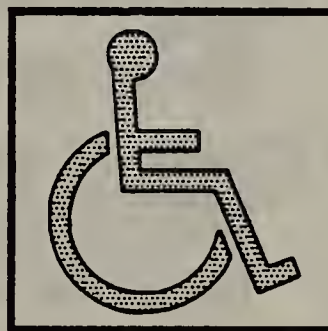


Figure 41b



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**Signage**

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**41.2 MOUNTING LOCATION AND HEIGHT**

Where permanent identification is provided for rooms and spaces, signs shall be installed on the wall adjacent to the latch side of the door. Where there is no wall *space* to the latch side of the door, including at double leaf doors, signs shall be placed on the nearest adjacent wall.

41.2.1 Mounting location shall allow a person to approach within three inches (3" = 76mm) of *signage* without encountering protruding objects or standing within the swing of a door.

41.2.2 Mounting height shall be sixty inches (60" = 1524mm) above the finish floor to the centerline of the sign.

---

**41.3 CHARACTER PROPORTION**

Letters and numbers on signs shall have a width-to-height ratio between 3:5 and 1:1, and a stroke-width-to-height ratio between 1:5 and 1:10.

---

**41.4 CHARACTER HEIGHT**

Characters and numbers on signs shall be sized according to the viewing distance from which they are to be read.

41.4.1 The minimum height is three inches (3" = 76mm) minimum and is measured using an upper case X.

41.4.2 Lower case characters are permitted.

---

**41.5 RAISED AND BRAILLED CHARACTERS AND PICTORIAL SYMBOL SIGNS**

Shall comply with the following:

41.5.1 Letters and numerals shall be raised one thirty-second of an inch (1/32" = 0.8mm), upper case, sans serif or simple serif type.

41.5.2 Letters and/or numerals shall be accompanied with Grade 2 Braille.

41.5.3 Raised characters shall be at least five-eighths of an inch (5/8" = 16mm) high, but no higher than two inches (2" = 51mm).

41.5.4 Pictograms shall be accompanied by the equivalent verbal description placed directly below the pictogram. The border dimension of the pictogram shall be six inches (6" = 152mm) minimum in height.

---

**41.6 FINISH AND CONTRAST**

The characters and background of signs shall be eggshell, matte, or other non-glare finish. Characters and symbols shall contrast with their background: either light characters on a dark background or dark characters on a light background.



## Signage

## 41.7 SYMBOLS OF ACCESSIBILITY

Facilities and *elements* required to be identified as *accessible* by Section 41.1.3 shall use the international symbol of accessibility. The symbol shall be displayed as shown in Fig. 41a and 41b.

## 41.8 VOLUME CONTROL TELEPHONES

Telephones required to have a volume control under Section 37.1.2, Telephones with Volume Control shall be identified by a sign containing a depiction of a telephone handset with radiating sound waves.

## 41.9 TELECOMMUNICATION DEVICES FOR THE DEAF (TDD)

*Telecommunication devices for the deaf (TDD)* required by Section 37.1, **Public Telephones** shall be identified by the international TDD symbol (See Fig. 41c). In addition, if a *facility* has a public *Telecommunication devices for the deaf (TDD)*, directional *signage* indicating the location of the nearest *Telecommunication devices for the deaf (TDD)* shall be placed adjacent to all banks of telephones that do not contain a *Telecommunication devices for the deaf (TDD)*. Such directional *signage* shall include the international TDD symbol. If a *facility* has no banks of telephones but a public *Telecommunication devices for the deaf (TDD)* is available, the directional *signage* shall be provided at the *entrance* (e.g., in a *building directory*).

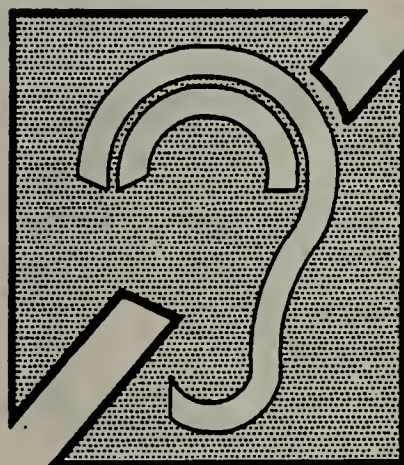
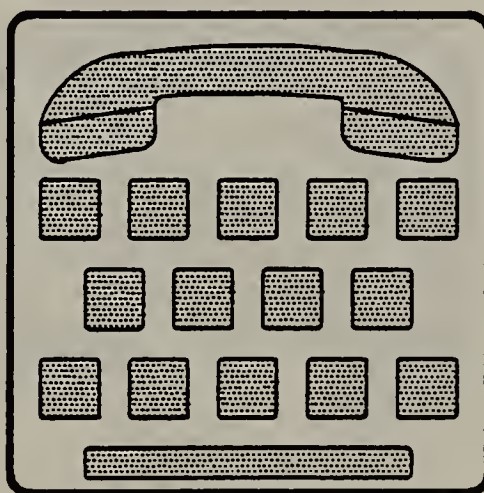


Figure 41d

International Symbol of Access for Hearing Loss



International TDD Symbol

Figure 41c

## 41.10 ASSISTIVE LISTENING SYSTEMS

In *assembly areas* where permanently installed assistive listening systems are required by Section 14.5, **Assistive Listening Device** the availability of such systems shall be identified with *signage* that includes the international symbol of access for hearing loss. See Fig 41d.

## 41.11 ILLUMINATION LEVELS:

Signage



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## Bathrooms in Group 1 Dwelling Units

### 42.0 GENERAL

In *Group 1 dwelling units* (see Section 9.2, *Applicability*) all *bathrooms* and *half bathrooms* shall comply with this section.

### 42.1 MINIMUM CLEAR FLOOR AREA

Is the thirty inch by forty-eight inch *space* (30" x 48" = 762mm x 1219mm) occupied by the average adult in the average wheelchair unless otherwise specified. *Clear* floor area shall be available at each fixture as shown below to enable users to reach fixture controls and to transfer out of a wheelchair. When a *bathroom* is adapted, the *clear* floor area must be able to be made free of obstructions, other than those shown in the diagram. The *clear* floor area for one fixture may overlap the *clear* floor area for other fixtures. The *clear* floor area for the tub or the toilet is measured from the closest edge of that fixture. The *clear* floor area for the sink may extend a maximum of nineteen inches (19" = 483mm) under the sink. Wing walls may not intrude on the minimum *clear* floor area.

### 42.2 MANEUVERING SPACE

Shall be available so that, at a minimum, a person using a wheelchair can enter, close the door, use each of the fixtures, reverse direction, reopen the door, and exit. See Fig. 42a and 42b.

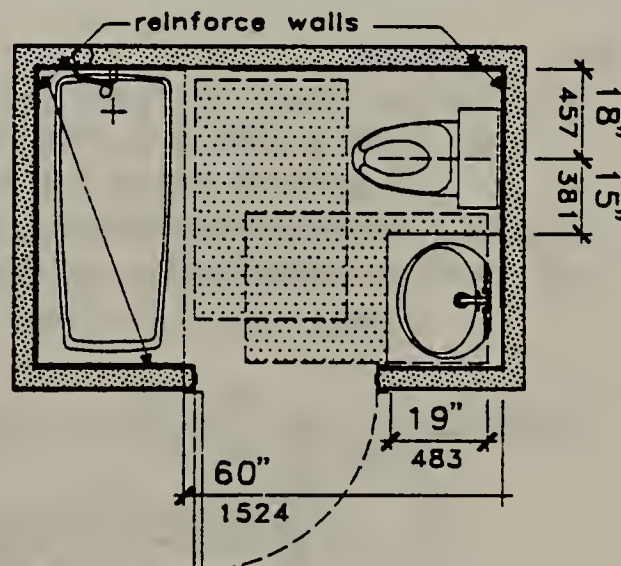
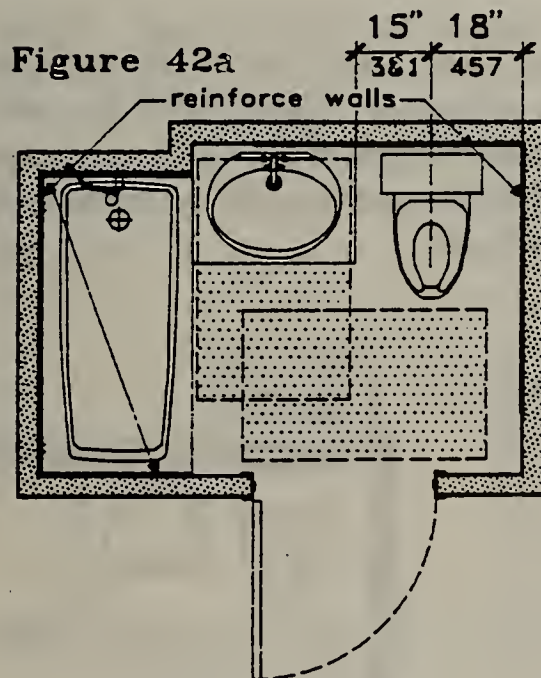


Figure 42b



## Bathrooms in Group 1 Dwelling Units

### 42.3 DOORS

Shall comply with Section 26.5, Width through Section 26.11, Door Hardware in addition to the following:

- 42.3.1 Clear opening: Doorways and openings shall provide a *clear* opening of not less than thirty-four inches ( $34" \pm 3/4" = 864\text{mm} \pm 19\text{mm}$ ), measured from the face of the door to the face of the stop on the latch side jamb when the door is open 90 degrees.
- 42.3.2 Operation: Doors shall swing out, fold or slide. Doors may swing into the *bathroom* if the swing of the door does not impede maneuvering *space*.

### 42.4 TOILETS

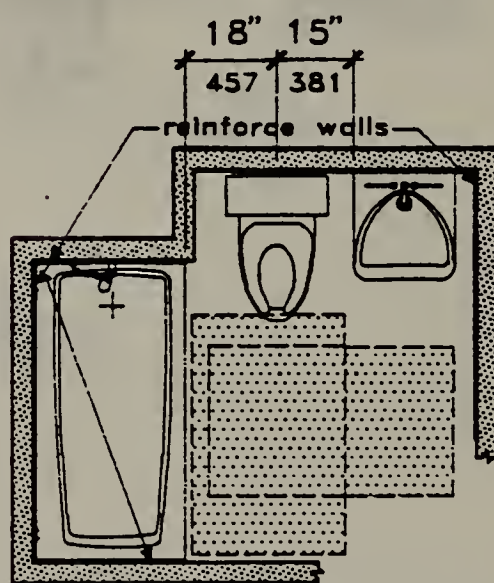
Shall comply with the following:

#### 42.4.1 Minimum Clear Floor Space:

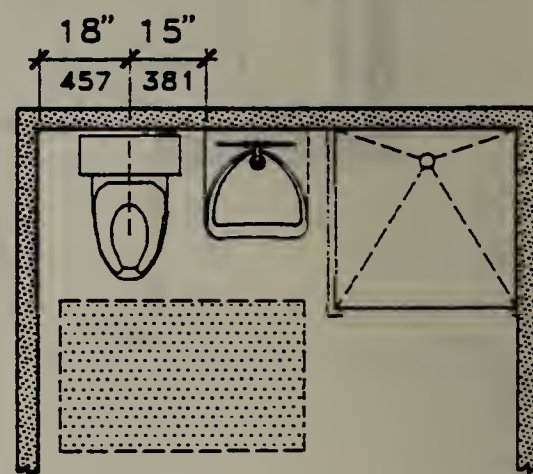
As defined in Section 42.1, Minimum Clear Floor Areas shall be provided or shall be capable of being provided without *structural change* in at least one of two locations at the toilet. One shall be beside the toilet with its short edge parallel to the wall behind the toilet. The other shall be in front of the toilet with its long edge parallel to the wall behind the toilet.

#### 42.4.2 Location

- a. When a toilet is located between a wall and a fixture, its centerline shall be eighteen inches ( $18" \pm 1" = 457\text{mm} \pm 25\text{mm}$ ) from the wall. If the minimum *clear* floor area is provided in front of the toilet, the centerline of the toilet shall be a minimum of fifteen inches ( $15" = 381\text{mm}$ ) from the closest edge of the fixture. See Fig. 42c.



Toilet between fixtures



Toilet between Wall and Fixture

Figure 42c

## Bathrooms in Group 1 Dwelling Units

- b. When a toilet is located between two (2) fixtures, its centerline shall be a minimum of eighteen inches (18" = 457mm) from a bathing fixture and a minimum of fifteen inches (15" = 381mm) from other types of fixtures. See Fig. 42c.

- 42.4.3 Wall reinforcement: Walls adjacent to and behind the toilet shall be capable of structurally supporting the future installation of grab bars at any location from twelve inches to sixty inches (12" to 60" = 305mm to 1524mm) above the floor and thirty inches (30" = 762mm) from the corner in each direction.

### 42.5 SINKS

At least one sink in a *bathroom* must meet the following:

- 42.5.1 Vanity Cabinets: If a cabinet is provided under a sink, it shall be capable of being removed.
- 42.5.2 Knee Space Width: The sink shall have or be capable of having, without *structural change*, a knee space of thirty inches (30" = 762mm) in width.
- 42.5.3 Knee Space Depth: The front edge of the sink fixture, or the countertop in which a sink is located, shall be a minimum of twenty-two inches (22" = 559mm) from the back wall or shall be capable of being relocated to create a *space* of that depth under the sink.
- 42.5.4 Height: The sink shall be capable of being raised or lowered without *structural change*.
- 42.5.5 Minimum Clear Floor Area: At the sink, as defined in Section 42.1, shall be perpendicular to the face of the sink and may extend under the sink. See Fig. 42d.

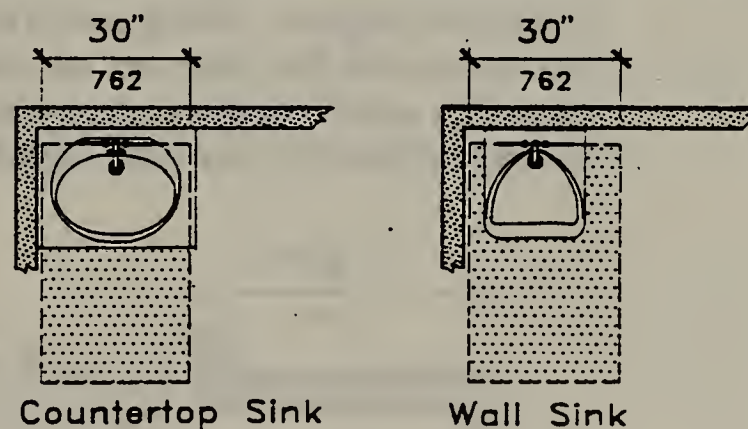


Figure 42d

### 42.6 BATHING FIXTURES

If more than one bathing fixture is provided in a *bathroom*, at least one must meet the requirements of this Section.

- 42.6.1 BATHTUBS shall comply with the following:

- a. Size: Bathtubs shall be at least sixty inches (60" = 1524mm) long.
- b. Minimum Clear Floor Area: at the bathtub, as defined in Section 42.1, shall be parallel to the face of the tub.



## Bathrooms in Group 1 Dwelling Units

- c. Wall Reinforcement: All tub walls shall be capable of structurally supporting the future installation of grab bars at any location from the rim of the tub to a height of sixty inches (60" = 1524mm) above the tub bottom.
- d. Door Enclosure: Tracks for sliding doors or enclosures mounted on the rim of a bathtub must be capable of removal to provide a smooth tub rim for transfer.

### 42.6.2 SHOWERS shall comply with the following: See Fig. 42e.

- a. Size: Shower stalls shall be a nominal dimension of thirty-six inches by thirty-six inches (36" x 36" = 914mm x 914mm).
- b. Minimum *Clear Floor Area*: at the shower, as defined in Section 42.1, shall be located parallel to and centered on the shower stall opening.
- c. Wall Reinforcement: All shower walls shall be capable of structurally supporting the future installation of grab bars, seats, etc., at any location from the floor to a height of sixty inches (60" = 1524mm) above the floor.
- d. Door: The opening of the shower stall must be thirty-four inches (34" = 864mm) wide. If a shower door is provided, it shall be capable of swinging open 180 degrees or of being removed.
- e. Seat: If a seat is provided, it shall be located on a wall adjacent to the opening. The seat shall be mounted with the edge as close as possible to the door opening to allow a safe transfer. If provided, grab bars shall not be located behind the seat.
- f. Hardware Location: Mixing valves shall be mounted on the wall opposite the opening so that they can be operated from a seat located on either wall. The centerline of the shower controls shall be located between thirty-eight inches and forty-eight inches (38" to 48" = 965mm to 1219mm).

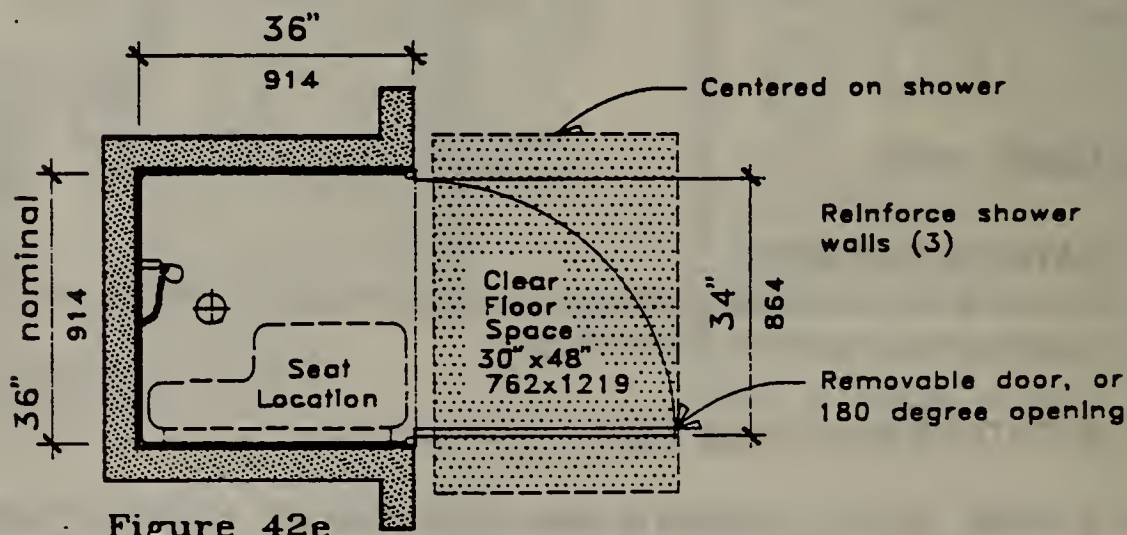


Figure 42e



**Bathrooms in Group 1 Dwelling Units**

**42.6.3** Soap Trays: shall not have a hand hold feature.

**42.6.4** Prefabricated Units: In prefabricated showers and tubs, structural reinforcement for grab bars must be in contact with the surface of walls on which grab bars may be mounted as described in **Section 42.6.2 (c)**.

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**42.7** **OUTLETS**  
Shall comply with **Section 39, Controls**.

---

**42.8** **CONTROLS AND ALARMS**  
Shall comply with **Sections 39, Controls** and **40, Alarms**.

**Bathrooms in Group 1 Dwelling Units**

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## Kitchens in Group 1 Dwelling Units

### 43.0 GENERAL

In all *Group 1 Dwelling units*, kitchens shall be designed so that, when a unit is adapted, a person in a wheelchair has access to the sink, cooking surface, refrigerator, and a food preparation surface and can turn around without having to leave the kitchen.

### 43.1 CLEAR FLOOR AREA

Shall be measured at the face of the base cabinets and shall be provided at the time of first occupancy as follows:

43.1.1 L-shaped kitchens shall have a minimum *clear* floor area of forty-eight inches by forty-eight inches ( $48'' \times 48'' = 1219\text{mm} \times 1219\text{mm}$ ). See Fig. 43a.

43.1.2 U-shaped kitchens shall provide a minimum clearance of forty-eight inches ( $48'' = 1219\text{mm}$ ) between opposing base cabinets or appliances. See Fig. 43b.

43.1.3 Galley kitchens shall provide a minimum clearance of forty-eight inches ( $48'' = 1219\text{mm}$ ) between opposing base cabinets or appliances. See Fig. 43c.

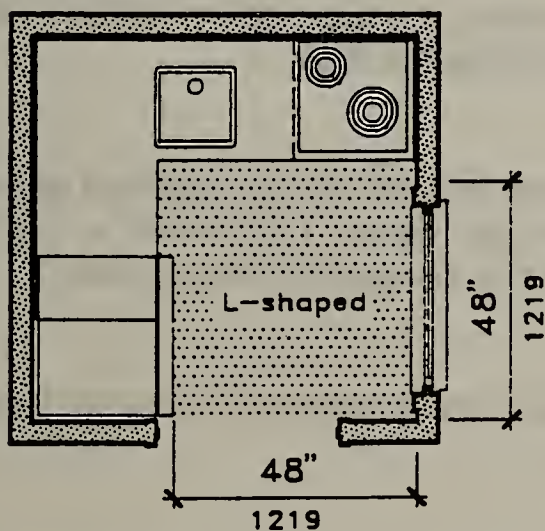


Figure 43a

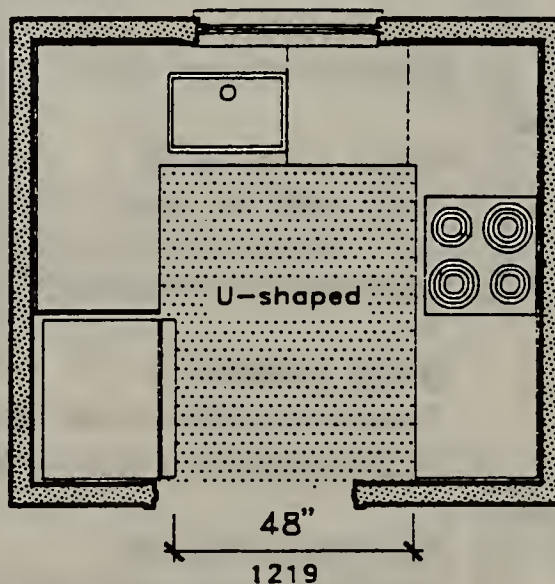


Figure 43b

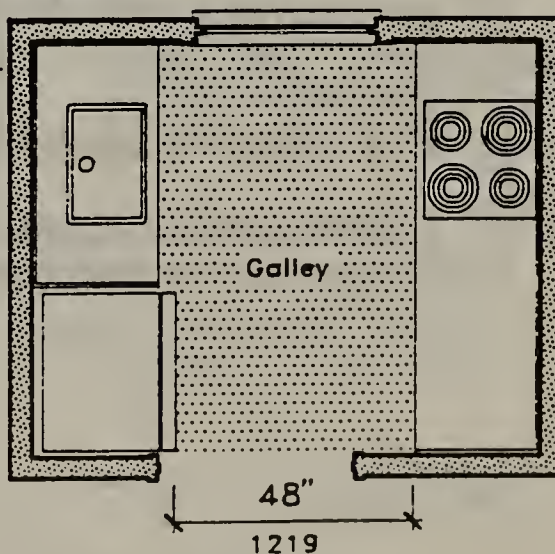


Figure 43c



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**Kitchens in Group 1 Dwelling Units**

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**43.2 SINKS**

Shall comply with the following:

- 43.2.1 Sink Cabinet: The base cabinet under the sink shall be capable of being removed to provide a kneespace of thirty inches (30" = 762mm) in width.
- 43.2.2 Sink Depth: The sink bowl shall not exceed six and one-half inches (6" = 152mm) in depth. Where more than one bowl is provided, only one bowl must meet this requirement.

---

**43.3 COOKING UNITS**

Shall comply with the following to ensure that both burners and ovens can be made functional and safe for a person in a wheelchair:

- 43.3.1 In-Counter cooktops: If a cooktop is provided, its base cabinet shall be capable of being removed to provide future kneespace the width of the cooktop but not less than thirty inches (30" = 762mm) wide. Cooktops shall have controls located at the front or side of the unit.
- 43.3.2 Wall Ovens: If a wall oven is provided, the floor of the wall oven shall be located thirty inches (30" = 762mm) above the floor.

---

**43.4 WALL CABINETS**

Walls shall be capable of structurally supporting wall cabinets at any location from forty-two inches to fifty-four inches (42" to 54" = 1067mm to 1372mm) from the floor to the bottom of the inside of the cabinet.

**43.5 BASE CABINETS**

Each base cabinet shall be capable of being removed to provide kneespace for persons using wheelchairs.

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**43.6 REFRIGERATORS**

The refrigerator shall be located or capable of being relocated so that its doors can be opened 180 degrees.

---

**43.7 OUTLETS**

Shall comply with **Section 39, Controls**.

---

**43.8 CONTROLS AND ALARMS**

Shall comply with **Sections 39, Controls** and **40, Alarms**.

## Bathrooms in Group 2 Dwelling Units

### 44.1 GENERAL

In all *dwelling units* required to be *Group 2A* units, (see Section 9.4 *Group 2A Dwelling Units*) all *bathrooms* and *half bathrooms* shall comply with this Section, exclusive of the italicized text. In facilities required to have *Group 2B bathrooms*, such as hotels, motels, inns and health facilities, the *bathroom* shall comply with this Section including the italicized text.

### 44.2 MANEUVERING SPACE

*Bathrooms* shall have or be capable of having either a minimum maneuvering space of sixty inches (60" = 1524mm) in diameter measured twelve inches (12" = 305mm) above the floor, or a sixty inch (60" = 1524mm) square, with thirty-six inch (36" = 914mm) legs, for a T-Turn, to permit a person using a wheelchair to turn around without coming into contact with any fixtures. See Fig. 44a.

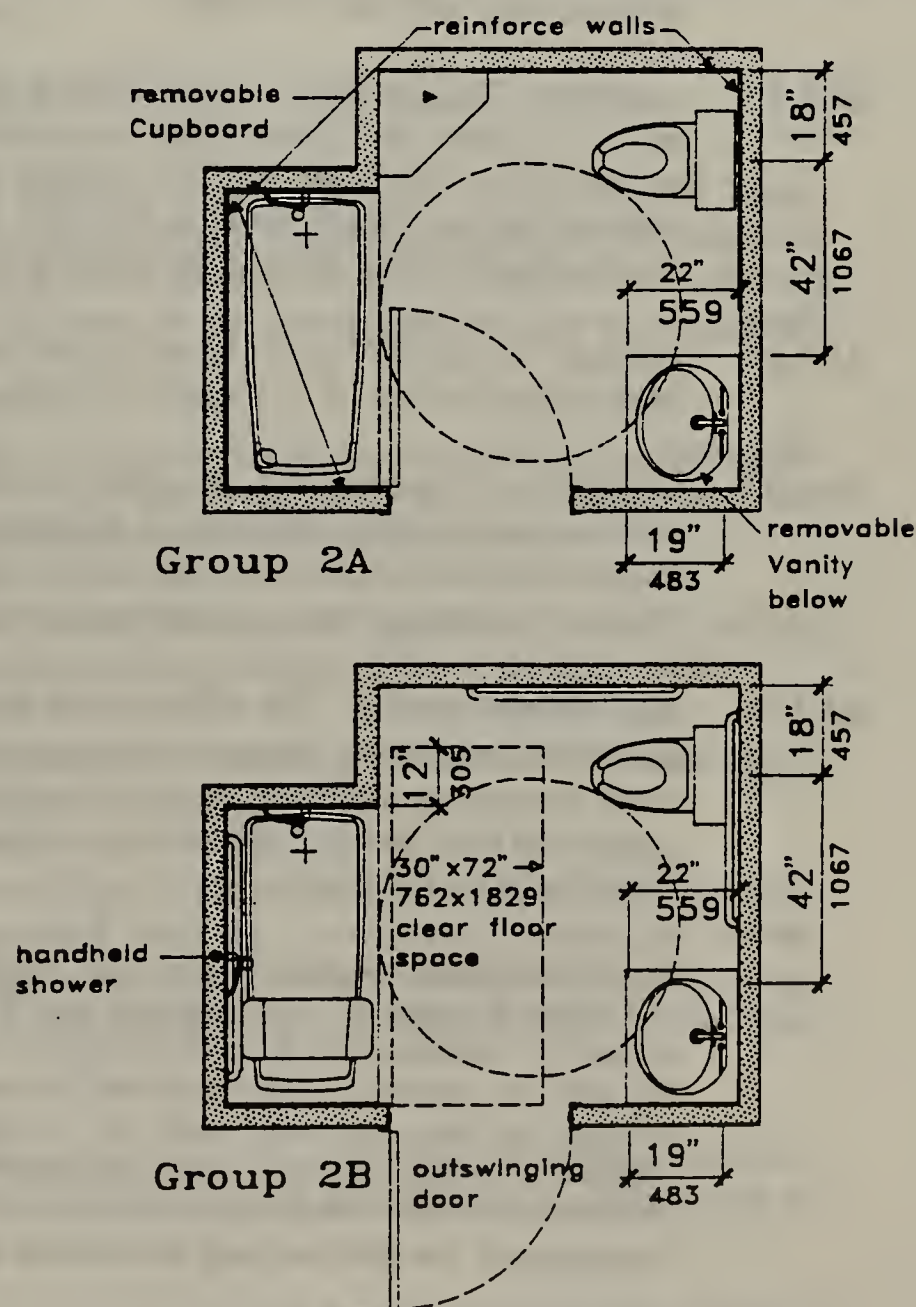


Figure 44a



**Bathrooms in Group 2 Dwelling Units****44.3 DOORS**

Shall comply with Sections 26.5, Width through 26.11, Door Hardware in addition to the following:

- 44.3.1 *Clear Opening:* Doors and openings shall provide a *clear* opening of not less than thirty-four inches ( $34'' \pm 3/4'' = 864\text{mm} \pm 19\text{mm}$ ), measured from the face of the door to the face of the stop on the latch side jamb when the door is open 90 degrees.
- 44.3.2 *Operation:* Doors shall swing out, fold or slide. Doors may swing into the *bathroom* if the swing of the door does not impede maneuvering *space*. See Section 42.2, Doors.

**44.4 TOILETS**

Shall comply with the following:

- 44.4.1 *Location:* The centerline of the toilet shall be located eighteen inches ( $18'' \pm 1'' = 457\text{mm} \pm 25\text{mm}$ ) from the nearest side wall and at least forty-two inches ( $42'' = 1067\text{mm}$ ) from the farthest side wall or the closest edge of an adjacent fixture. There shall be forty-two inches ( $42'' = 1067\text{mm}$ ) *clear* from the front edge of the toilet to the nearest wall or fixture.
- 44.4.2 *Height:* The top of the toilet rim (not the seat) shall be fourteen inches to sixteen inches ( $14''$  to  $16'' = 356\text{mm}$  to  $406\text{mm}$ ) above the floor.
- 44.4.3 *Operation:* The flush activator shall be operable with a closed fist and shall not require grasping, pinching, or twisting of the wrist. Toilets equipped with flush valves shall have the flush control on the *accessible* side of the toilet. Flush activators on tank type toilets can be located on either side of the tank.
- 44.4.4 *Wall Reinforcement:* The walls behind and beside the toilet shall have structural reinforcement to allow the future installation of grab bars at any location from thirty-three inches to thirty-six inches ( $33''$  to  $36'' = 838\text{mm}$  to  $914\text{mm}$ ) above the floor and at least thirty-six inches ( $36'' = 914\text{mm}$ ) in both directions from the interior corner.

*In Group 2B bathrooms, two (2) grab bars, one forty-two inches ( $42'' = 1067\text{mm}$ ) long and one thirty-six inches ( $36'' = 914\text{mm}$ ) long shall be installed at the toilet between thirty-three inches ( $33'' = 838\text{mm}$ ) and thirty-six inches ( $36'' = 914\text{mm}$ ) above and parallel to the floor. The forty-two inch ( $42'' = 1067\text{mm}$ ) grab bar shall be mounted on the side wall closest to the toilet, no more than twelve inches ( $12'' = 305\text{mm}$ ) from the back wall. The thirty-six inch ( $36'' = 914\text{mm}$ ) grab bar shall be mounted on the back wall six inches ( $6'' = 152\text{mm}$ ) from the interior corner and may be located up to three inches ( $3'' = 76\text{mm}$ ) above the top of the toilet tank. The grab bars shall also meet the definition of structural strength.*



## Bathrooms in Group 2 Dwelling Units

- 44.4.5 Toilet Paper Dispensers: The toilet paper dispensers shall be located on the side wall closest to the toilet. The centerline of the roll shall be set at a minimum height of nineteen inches (19" = 483mm) above the floor. Dispensers that control delivery or that do not permit continuous paper flow are not allowed.

### 44.5 SINKS

Shall comply with the following:

- 44.5.1 *Adaptability*: The sink, its plumbing, and the walls adjacent to the sink shall be designed so that the sink can be relocated vertically and so that the sink installation meets the definition of *structural strength*.

- 44.5.2 Vanity Cabinets: Where a cabinet or vanity is provided under a sink, it shall be removable or replaceable to provide a knee space that complies with Sections 44.5.4 and 44.5.5.

*In Group 2B bathrooms, base cabinets can be used only if kneespace is provided.*

- 44.5.3 Height: The sink shall be capable of being raised or lowered in the future, without requiring *structural change* to the walls of the *bathroom*. A sink with kneespace shall be installed or be capable of being installed, with at least twenty-nine inches (29" = 737mm) of clearance from the floor to the bottom of the apron.

*In Group 2B bathrooms, the sink rim or counter surface shall be installed at a height of thirty-four inches (34" = 864mm) from the floor and there shall be at least twenty-nine inches (29" = 737mm) of clearance from the floor to the bottom of the apron.*

- 44.5.4 Kneespace width: The sink shall have or be capable of having, without *structural change*, a knee space of thirty inches (30" = 762mm) in width.

*In Group 2B bathrooms, a kneespace of thirty inches (30" = 762mm) in width must be provided.*

- 44.5.5 Kneespace depth: The front edge of the sink or the front edge of the countertop in which a sink is located, shall be a minimum of twenty two inches (22" = 559mm) from the back wall or be capable of being relocated to create a space twenty-two inches (22" = 559mm) from the back wall to the front edge of the sink.

*In Group 2B bathrooms, the front edge of the sink or the front edge of the countertop in which a sink is located, shall be a minimum of twenty two inches (22" = 559mm) from the back wall.*

- 44.5.6 Sink type: Sinks shall have drains located at the back of the basin and shall not exceed six inches (6" = 152mm) in depth.

**Bathrooms in Group 2 Dwelling Units**

- 44.5.7 Piping: All piping under the sink shall be offset to the back wall so that people in wheelchairs have maximum possible kneespace.

*In Group 2B bathrooms, the hot water and waste pipes under the sink shall be offset to the back wall and insulated.*

- 44.5.8 Hardware: Faucets shall be operable with a closed fist and shall not require grasping, pinching, or twisting of the wrist.

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**44.6 BATHING FIXTURES**

If more than one bathing fixture is provided in a *dwelling unit*, one shall be a shower unit complying with Section 44.6.2. If a jacuzzi or whirlpool tub is the only bathing *facility*, it must meet the requirements of Section 44.6.1. Where one bathing fixture is provided, it may be either a shower unit or a bathtub.

- 44.6.1 Bathtubs shall comply with the following:

- a. Fixtures: Bathtubs shall be a minimum of sixty inches (60" = 1524mm) long. The rim shall be between sixteen and eighteen inches (16" and 18" = 406mm and 457mm) above the floor.
- b. Minimum floor area: A *clear* floor area thirty inches (30" = 762mm) wide and at least seventy-two inches (72" = 1829mm) long shall be provided adjacent to the tub. At least twelve inches (12" = 305mm) of the *clear* floor area length shall extend beyond the drain end of the tub if the tub is sixty inches (60" = 1524mm).
- c. Wall reinforcement: All walls of the tub shall have structural reinforcement to allow the future installation of grab bars at any location from the rim of the tub to a height of sixty inches (60" = 1524mm) above the tub bottom.

*In Group 2B bathrooms, two (2) grab bars, forty-eight inches (48" = 1219mm) long, shall be installed centered on the long wall and parallel to the floor. One shall be mounted at a height of twenty-one inches (21" = 533mm) and one at a height of thirty-six inches (36" = 914mm) above the floor.*

- d. Tub material: Tubs shall be structurally capable of accepting the installation of a lift that clamps onto the rim.
- e. Hardware: Faucets shall be operable with a closed fist and shall not require grasping, pinching, or twisting of the wrist.
- f. Hardware location: Faucets and mixing valves shall be centered horizontally on the long wall of the tub, twenty-eight inches (28" = 711mm) above the floor. The tub spout shall be located on the end wall above the drain and a shower head may be located on either the end wall or long wall. If hardware is installed in locations other than those specified, piping shall



## Bathrooms in Group 2 Dwelling Units

also be available at the specified locations.

- g. Hand held showers: A hand held shower head with a flow regulator, attached to a sixty inch (60" = 1524mm) long flexible hose and an adjustable mounting bar, shall be provided or be capable of being installed on the long wall of the tub.

*In Group 2B bathrooms, a hand held shower head attached to a sixty inch (60" = 1524mm) long flexible hose and an adjustable mounting bar, thirty-six inches (36" = 914mm) long, shall be installed on the long wall of the tub. The bottom of the mounting bar shall be located at forty inches (40" = 1016mm) above the floor.*

- h. Door enclosures: Tracks for sliding doors or enclosures shall not be mounted on the rim of the bathtub unless they can be removed easily.

*In Group 2B bathrooms, sliding doors shall not be used.*

- i. Soap Trays: Soap trays shall not have a hand hold feature and shall be installed or be capable of being relocated with a centerline no higher than forty-eight inches (48" = 1219mm) above the floor.

*In Group 2B bathrooms, soap trays shall be installed no higher than forty-eight inches (48" = 1219mm) above the floor to the centerline of the soap tray.*

### 44.6.2 Showers shall comply with the following:

- a. Fixture size: The shower shall be the wheel-in type with a nominal size of thirty inches by sixty inches (30" x 60" = 762mm x 1524mm). The long side shall be fully open or may be thirty-six by sixty inches (36" x 60" = 914mm x 1524mm) with a two foot (2' = 610mm) wing wall on the sixty inch (60" = 1524mm) side. The curb shall have no more than a one-half inch (1/2" = 13mm) maximum lip, beveled at a slope no steeper than 1:4 (25%). See Fig. 44b.

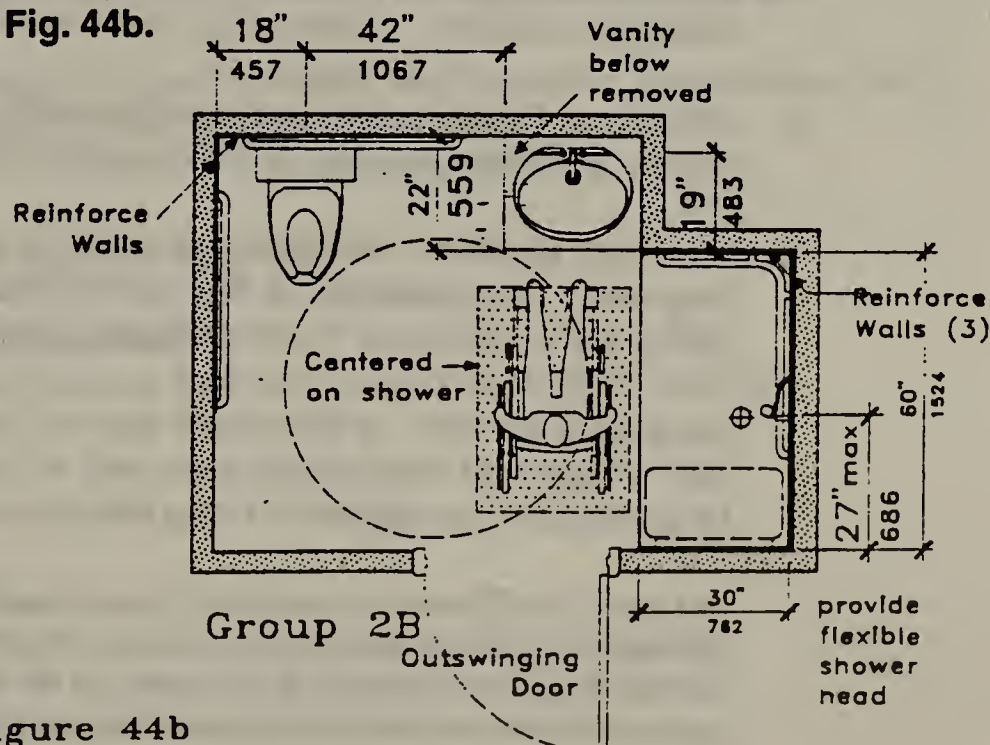


Figure 44b



## Bathrooms in Group 2 Dwelling Units

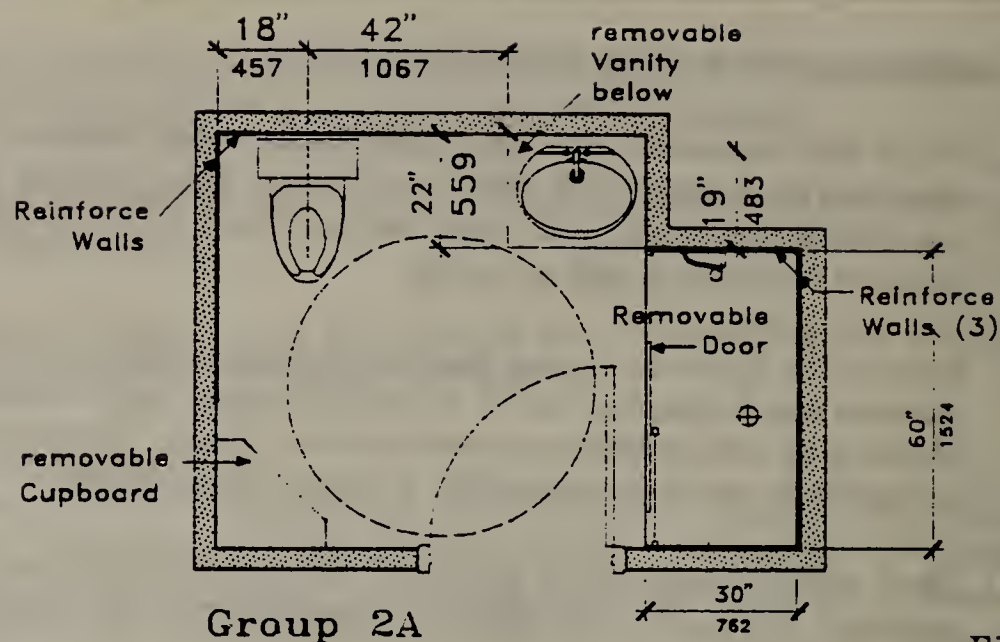


Figure 44b

- b. Wall reinforcement: All walls of the shower shall have structural reinforcement to allow the future installation of a seat and grab bars, at any location from the floor to a height of sixty inches (60" = 1524mm) above the floor.

*In Group 2B bathrooms, one grab bar forty-eight inches (48" = 1220mm) long shall be installed on the long wall, at a height of thirty-six inches (36" = 915mm) above the floor.*

- c. Seat: A hinged padded shower seat shall be installed or be capable of being installed on a wall adjacent to the opening. The seat shall be mounted with the edge as close as possible to the opening to provide a safe transfer. The top of the seat shall be seventeen to nineteen inches (17" to 19" = 432mm to 483mm) above the floor.

*In Group 2B bathrooms, a hinged padded shower seat shall be installed and mounted as specified above. The seat shall be a minimum of sixteen inches (16" = 406mm) deep by twenty-four inches (24" = 610mm) long. Grab bars shall not be located behind the seat.*

- d. Hardware: Faucets shall be operable with a closed fist and shall not require grasping, pinching, or twisting of the wrist.
- e. Hardware location: Mixing valves shall be centered horizontally on the long wall. The centerline of the control shall be mounted thirty inches (38" to 48" = 965mm to 1219mm) above the floor.
- f. Hand held shower: A hand held shower head attached to a sixty inch (60" = 1524mm) long flexible hose and an adjustable mounting bar shall be provided or be capable of being installed in the shower.

*In Group 2B bathrooms, a hand held shower head attached to a sixty inch (60" = 1524mm) long flexible hose and an adjustable mounting bar, thirty-six inches (36" = 914mm) long shall be installed in the shower on the long wall adjacent to the seat. The bottom of the mounting bar shall be located at forty inches (40" = 1016mm).*

## Bathrooms in Group 2 Dwelling Units

- g. Soap tray: Soap trays shall not have a hand hold feature and shall be installed or be capable of being relocated with a centerline no higher than thirty inches (30" = 762mm) above the floor.

*In Group 2B bathrooms, soap trays shall be installed no higher than thirty inches (30" = 762mm) above the floor to the centerline of the soap tray.*

### 44.7 GRAB BARS

Grab bars shall be non-rusting and *slip resistant*, shall be one and one-quarter inches (1-1/4" = 32mm) in outside diameter, and shall be located one and one-half inches (1-1/2" = 38mm) *clear* from the wall. There is no tolerance allowed on the one on one half inch (1-1/2" = 38mm).

### 44.8 MIRRORS

Shall comply with the following:

- 44.8.1 A mirror over a sink shall be installed at or be capable of being relocated to a height of forty inches (40" = 1016mm) from the floor to the bottom edge of the mirror's reflecting surface.
- 44.8.2 The top of the mirror shall be at least seventy-two inches (72" = 1829mm) above the floor line.

*In Group 2B bathrooms, a mirror shall be installed with the bottom no more than forty inches (40" = 1016mm) above the floor and the top no less than seventy-two inches (72" = 1829mm) above the floor.*

### 44.9 MEDICINE CABINETS

One medicine cabinet shall be installed or be capable of being relocated so that the bottom shelf is at a height of forty inches (40" = 1016mm) above the floor. If the medicine cabinet is also the only mirror, the bottom of the mirror shall be no higher than forty inches (40" = 1016mm) above the floor.

*In Group 2B bathrooms, the medicine cabinet shall be installed with its bottom shelf at a height of forty inches (40" = 1016mm) above the floor.*

### 44.10 OUTLETS

Shall comply with **Section 39 Controls**.

### 44.11 CONTROLS AND ALARMS

Shall comply with **Section 39 Controls** and **Section 40 Alarms**.

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## Kitchens in Group 2 Dwelling Units

### 45.1 GENERAL

In *Group 2A dwelling units* (Section 9.4 Group 2A Dwelling Units) all kitchens shall comply with this Section. In *Group 2B* units, such as hotels, motels, and inns, the kitchen shall comply with this Section plus the italicized portions.

### 45.2 MINIMUM CLEAR FLOOR AREA

Thirty inches by forty-eight inches (30" x 48" = 762mm x 1219mm) shall be provided in front of those appliances which have no kneespace including but not limited to: refrigerators and wall ovens.

### 45.3 MANEUVERING SPACE

Shall be either a minimum of sixty inches (60" = 1524mm) in diameter, measured twelve inches (12" = 305mm) above the floor, or shall be a sixty inch square (60" = 1524mm), with thirty-six inch (36" = 914mm) legs, for a T-Turn, to permit a person using a wheelchair to turn around without coming into contact with any fixtures. In addition, when a sink and a cooktop are located fifteen inches (or less) (15" = 381mm) apart, the counter shall provide or shall be capable of providing continuous *clear* kneespace at least twenty-nine inches (29" = 737mm) in height. See Fig. 45a

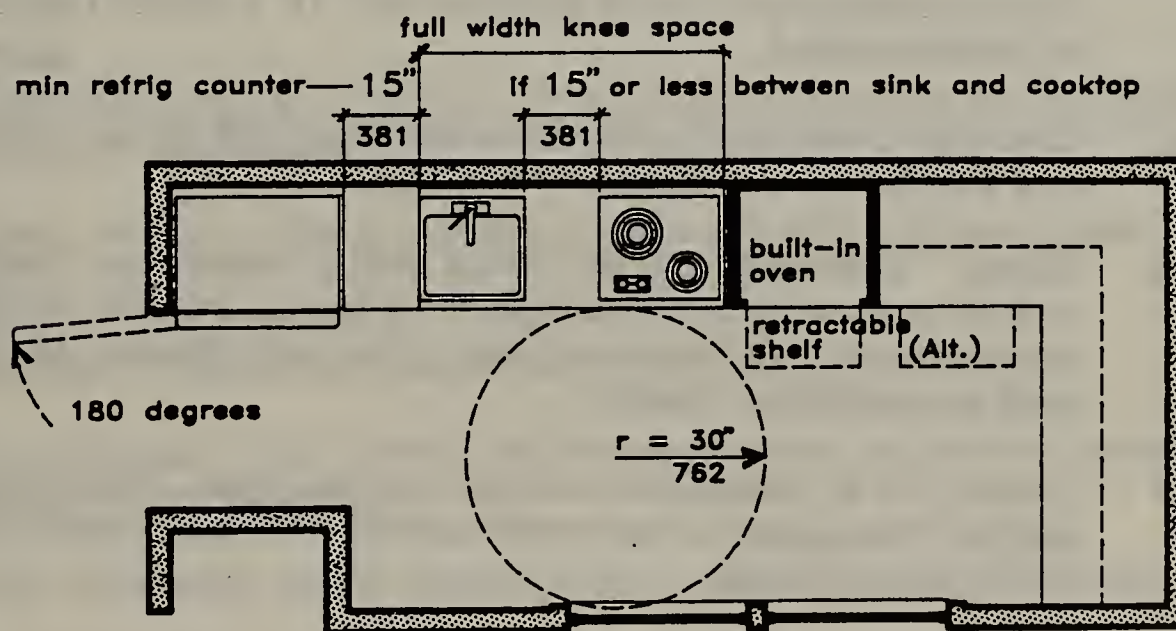


Figure 45a

## Kitchens in Group 2 Dwelling Units

### 45.4 SINKS

Shall comply with the following:

- 45.4.1 Sink cabinet: If a base cabinet is provided under the sink, it shall be removable to provide a kneespace that complies with **Sections 45.4.2 and 45.4.3.**

*In Group 2B units, base cabinets shall not be installed unless kneespace can be provided.*

- 45.4.2 Kneespace: A *clear* kneespace shall be provided or be capable of being provided under the sink, twenty-two inches (22" = 559mm) deep and at least thirty inches (30" = 762mm) wide.

*In Group 2B units, kneespace shall be provided.*

- 45.4.3 Height: The sink shall be capable of being relocated vertically in the future, without *structural change* to the walls of the kitchen.

*In Group 2B units, the kitchen sink shall be located so that there is twenty-nine inches (29" = 737mm) from the floor to the underside of the sink.*

- 45.4.4 Countertop: A counter *space* at least fifteen inches (15" = 381mm) wide shall be provided on one side of the sink, at the same height as the sink. This may overlap with one of the fifteen inch (15" = 381mm) spaces required in **Sections 45.5.4.**

- 45.4.5 Sink depth: Sink bowls shall not exceed six inches (6" = 152mm) in depth and shall have drains offset to a rear corner.

- 45.4.6 Piping: Water pipes and drain traps shall be located as close to the rear wall of the kneespace and as high off the floor as possible to provide maximum kneespace. If there is no base cabinet under the sink, pipes and traps shall be insulated or covered.

- 45.4.7 Disposals: If a garbage disposal has a remote switch, it shall be located on the front face (apron) of the counter located to the left or right of the sink but not in front of the sink.

- 45.4.8 Sink Hardware: Faucets shall be operated by a single lever. A spray hose shall be provided or a knockout provided on the sink.

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### 45.5 COOKTOPS

Standard ranges shall not be the only cooking surface. Cooktops shall be provided and shall comply with the following:

- 45.5.1 Base cabinets: If a base cabinet is provided under the cooktop, it shall be removable to provide kneespace that complies with **Section 45.4.2.**

*In Group 2B units, base cabinets shall not be installed unless kneespace can be provided.*



## Kitchens in Group 2 Dwelling Units

- 45.5.2 Kneespace: A *clear* kneespace shall be provided or be capable of being provided under the cooktop, twenty-two inches (22" = 559mm) deep and at least thirty inches (30" = 762mm) wide.

*In Group 2B units, kneespace shall be provided.*

- 45.5.3 Height: The cooktop shall be capable of being relocated vertically in the future, without *structural change* to the walls of the kitchen.

*In Group 2B units, the kitchen cooktop shall be located so that there is twenty-nine inches (29" = 737mm) from the floor to the underside of the cooktop.*

- 45.5.4 Countertop: A counter *space* at least fifteen inches (15" = 381mm) wide shall be provided on one side of the cooktop, at the same height as the cooktop. This may overlap with one of the fifteen inch (15" = 381mm) spaces required in **Section 45.4.4**.

- 45.5.5 Controls: Cooktop controls shall be located at the front or side of the appliance.

- 45.5.6 Exhaust hood: If the controls for a hood are located higher than fifty-four inches (54" = 1372mm) above the floor, a switch shall be provided at the front face (apron) of counter.

### 45.6 OVENS

All microwave ovens, if built-in, and at least one conventional oven shall comply with the following:

- 45.6.1 Height: The floor of the oven shall be thirty inches (30" = 762mm) above the floor.
- 45.6.2 Oven type: The oven shall be self-cleaning or continuous cleaning.
- 45.6.3 Control location: Oven controls shall be located within the *zone of reach* as defined by these regulations.
- 45.6.4 Shelf: A retractable "bread board" type shelf shall be provided at the oven:
- Where a bottom-hinged oven door is provided, locate the shelf in the counter immediately adjacent to the oven door.
  - Where a side-hinged oven is provided, locate the shelf directly under the oven.

### 45.7 WALL CABINETS

Walls shall be capable of structurally supporting wall cabinets so that the inside bottom surface of the cabinet is capable of being located between forty-two inches (42" = 1067mm) and sixty inches (60" = 1524mm) above the floor.



**Kitchens in Group 2 Dwelling Units**

*In Group 2B units, the wall cabinets shall be mounted so that the inside bottom surface of the cabinet is no higher than forty-eight inches (48" = 1219mm) from the floor.*

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**45.8 BASE CABINETS**

Shall comply with the following:

- 45.8.1 *Adaptability.* Each cabinet shall be capable of being removed to provide *clear knee space* for persons using wheelchairs.
- 45.8.2 *Comers:* Cabinets located at the inside comer of an L-shaped counter shall have a built-in lazy susan.
- 45.8.3 *Drawers:* At least one base cabinet shall provide drawers.

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**45.9 CABINET HARDWARE**

Shall comply with the following:

- 45.9.1 *Type:* Opening devices shall not require twisting, pinching or grasping to operate.
- 45.9.2 *Location:* Cabinet opening devices shall be located at the tops of base cabinet doors and at the bottom of wall cabinet doors.

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**45.10 REFRIGERATORS**

May be combination refrigerator-freezers with two (2) doors side by side, or may be two (2) door freezer-above-the-refrigerator units, provided the bottom of such freezer is no higher than forty-four inches (44" = 1118mm) above the floor, and shall be self-defrosting.

- 45.10.1 *Location:* The refrigerator shall be located so that its doors are capable of being opened 180 degrees and so that it meets minimum *clear floor area* and *zone of reach* requirements in **Sections 6.3, Wheelchair Turning Space, 6.5, Forward Reach** and **6.6, Side Reach**.
- 45.10.2 *Counterspace:* A counter *space* at least fifteen inches (15" = 381mm) wide shall be provided on one side of the refrigerator. This may overlap with one of the fifteen inch spaces (15" = 381mm) required in **Section 45.4.4** or **45.5.4**.

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**45.11 OUTLETS**

Shall comply with **Section 39 Controls**.

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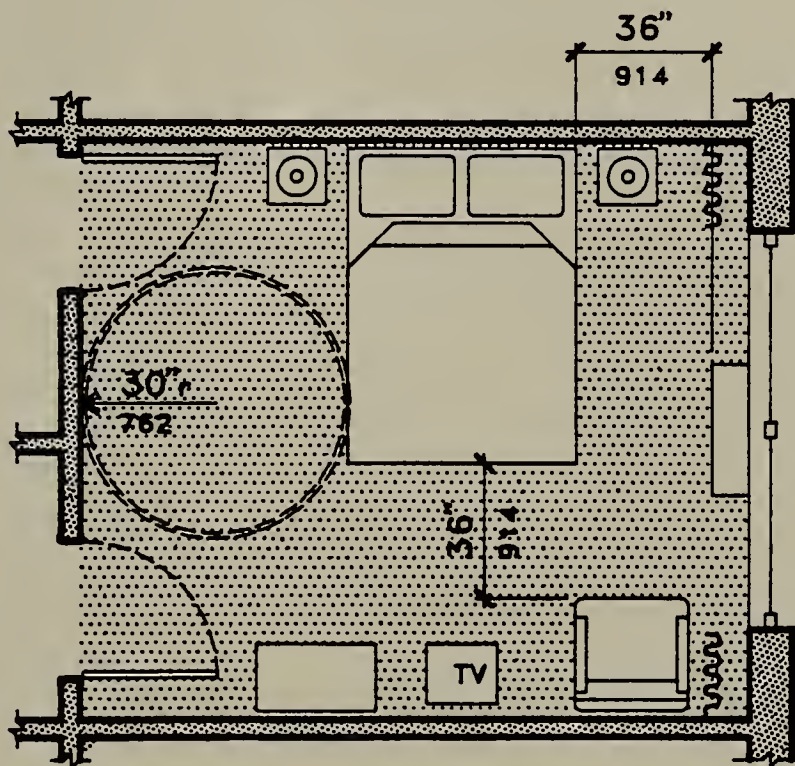
**45.12 CONTROLS AND ALARMS**

Shall comply with **Section 39 Controls** and **Section 40 Alarms**.

### Bedrooms in Group 1 and 2 Dwelling Units

## 46.1 BEDROOMS

Shall provide adequate *space* for persons in wheelchairs to use all furniture and shall provide *clear space* of sixty inches (60" = 1524mm) in diameter, *clear* of the door swing, at one side of the bed in the master bedroom (assuming a full size bed). Where more than one bedroom is provided, an additional bedroom shall provide *clear space* of sixty inches (60" = 1524mm) in diameter (assuming one twin size bed). See Fig. 46a.



## Accessible Sleeping Rooms

### Figure 48a

## 46.2 CLOSETS

Shall comply with Section 9.8.8, Closets.

## 46.3 ELECTRICAL OUTLETS

Shall comply with Section 39, Controls.

## 46.4 CONTROLS AND ALARMS

Shall comply with Section 39, Controls and Section 40 Alarms.

**Bedrooms in Group 1 and 2 Dwelling Units**

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